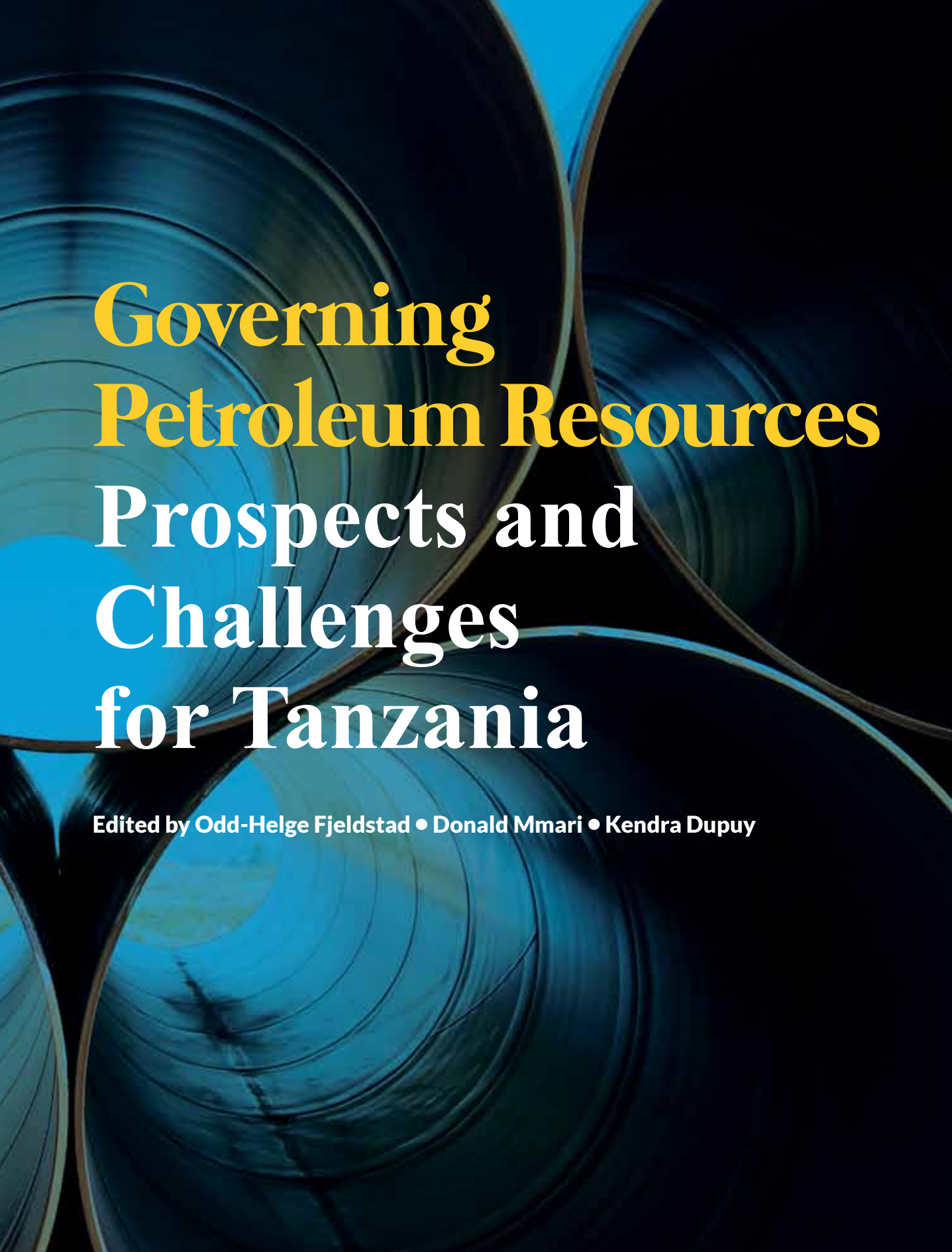

Governing Petroleum Resources

Prospects and Challenges for Tanzania

Edited by Odd-Helge Fjeldstad • Donald Mmari • Kendra Dupuy

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and Kendra Dupuy

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Bergen/Dar es Salaam, 10 November 2019
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Forewords

Norwegian Ambassador to Tanzania Elisabeth Jacobsen

Norway supports Tanzania's ambition of achieving the Sustainable Development Goals by relying on its own resources – through industrialization and domestic revenue mobilization. Natural resources can help drive this transformation.

This, however, requires sound management of the country's natural resources. Managing oil and gas resources is no easy task. For many countries, turning resource wealth into improved welfare for citizens has proven challenging - with resources often becoming a curse rather than a blessing.

Norway's development as a Petro State differs, showing what is possible when resources are used to the benefit of a country's citizens. We do not claim to have the one model that suits all. But our experience can still benefit other countries.

Our support to the *Tanzania as a Future Petro-State programme* can be viewed in this perspective. The programme has generated knowledge and promoted public debate on the prospects and challenges of Tanzania's future as the country begins to develop its major hydrocarbon resource. Through training and seminars, the programme has also invested in the capacity of key actors in the extractives sector. As readers will note, the summary of key outputs of the Programme presented in this book, reflect crucial lessons from the Norwegian oil and gas experience.

First, petroleum-rich states are most likely to prosper if there is a stable legal framework and a predictable trade and investment environment based on international standards. The same factors also benefit the petroleum sector.

Second, openness, accountability and democratic oversight are key. Norway's transparent and democratic system, rule of law and strong institutions enabled steady and predictable development in the oil and gas sector and enhanced technological development in the field.

A third lesson from Norway's experience is that strong national expertise and continuous generation of knowledge matters. Norway's petroleum industry was initially dominated by foreign companies responsible for developing the first oil and gas fields. Although the government wanted these players to remain, it was also convinced that building up domestic expertise was equally important.

Finally, the role of an informed and active public debate cannot be overstated. Evidence-based dialogue can drive better policymaking. To achieve responsible management of petroleum resources the people must be able to hold the authorities

accountable. This entails ensuring that civil society organizations are given the space to work effectively with the petroleum sector.

Translating oil and gas resources into economic development and welfare for all Tanzanians depends on strong and evidence-based policymaking and public debate. It is my sincere hope that this book will be an important contribution to achieving this.

Norwegian Ambassador to Tanzania Elisabeth Jacobsen

Ambassador Elisabeth Jacobsen (Cand. Polit (M.A.) Sociology, University of Bergen), has been affiliated with the Foreign Service since 1990. She has served as Head of the Office for Development Research, Director for Asian Affairs and Director for African Affairs at the Norwegian Ministry of Foreign Affairs. She was Ambassador in Nairobi from 2005 to 2010. Since 2018 she has served as Ambassador in Dar es Salaam.

Foreword

Professor Benno J. Ndulu

This book comes at a right time when the Government of the United Republic of Tanzania is making concerted efforts to transform its economy and to maximize the benefits of its natural resources to the citizens. The book combines theoretical and evidence-based analysis of the development in the petroleum sector in Tanzania, particularly the natural gas sub-sector, pointing to the prospects for becoming a future Petro state and the challenges we must confront. In addition to the discovered reserves of natural gas in our country to the tune of 57 trillion cubic feet, Tanzania is endowed with many other natural resources, including a variety of minerals and gemstones, vast agricultural land, wildlife, forestry, and a uniquely strategic geographical location. If all these resources are optimally exploited, along with a set of right policies and institutions, the country's vision of becoming a semi-industrialized middle-income country by 2025 should be achievable.

The contribution of this book to our policy dialogue is visible. The Government is determined to ensure that natural gas wealth is transformed into lasting benefits by leveraging our comparative advantages. Recent reviews of policies and legislations and efforts to strengthen regulatory and investment promotion institutions is an attempt to optimize the exploitation and use of these resources. The history and experience of many resource-rich countries, as the book correctly points, is not impressive. Many have succumbed to the resource curse in different forms, ranging from the "Dutch" disease, slow growth, overdependency on primary commodity exports, and conflicts. Tanzania can achieve different results by avoiding the resource curse and maximizing the benefits of natural resources to the citizens in the present days and for the future generations. Resource curse is not a destiny for a resource rich country. This book lays out clearly what needs to be done to avoid it. It can be done.

It is my belief, therefore, that the readers of this book, edited and authored by researchers from REPOA and their CMI counterparts, will find this book informative to the nation's transformative policy processes. It covers important aspects of local content development, revenue and expenditure management, regulatory framework, economic diversification, and the political economy of the petroleum industry. The book is highly recommended for academicians, researchers, policy makers, and development practitioners from both the public and private sectors.

Professor Benno J. Ndulu

Professor Benno Ndulu (PhD, Northwestern University, Illinois, USA) is Mwalimu Nyerere Professorial Chair in Development, University of Dar es Salaam, and Visiting Professor Blavatnik School of Government, University of Oxford. He has worked as Lead Economist for the World Bank in East Africa, and was instrumental in developing the African Economic Research Consortium. From 2008-2018 he served as Governor of the Bank of Tanzania.

Abbreviations

AGIP	–	Azienda Generali Italiana Petroli
AMOCO	–	American Oil Company
ASM	–	Artisanal and Small-scale Mining
BBL	–	Barrel
BoT	–	Bank of Tanzania
BP	–	British Petroleum
CSO	–	Civil Society Organization
CSR	–	Corporate Social Responsibility
DFID	–	Department for International Development
DMO	–	Domestic Market Obligation
EAC	–	East African Community
EAMU	–	East African Monetary Unit
EIB	–	European Investment Bank
EITI	–	Extractive Industries Transparency Initiative
EWURA	–	Energy and Water Utilities Regulatory Authority
FDI	–	Foreign Direct Investment
GASCO	–	Gas Supply Company
GDP	–	Gross Domestic Product
GoT	–	Government of Tanzania
HGA	–	Host Government Agreement
IDA	–	International Development Association
ILO	–	International Labour Organization
IOC	–	International Oil Company
IPP	–	Independent Power Producer
LCP	–	Local Content Policy
LNG	–	Liquefied Natural Gas
LSM	–	Large-scale Mining
KILAMCO	–	Kilwa Ammonia Company Ltd.
MAB	–	Mineral Advisory Board
MDA	–	Mineral Development Agreement
M&P	–	Maurel & Prom
MoE	–	Ministry of Energy
MoM	–	Ministry of Minerals
MEM	–	Ministry of Energy and Minerals
MMBtu	–	Metric Million British Thermal Units
MoE	–	Ministry of Energy
MoM	–	Ministry of Minerals
MPSA	–	Model Production Sharing Agreement
NBS	–	National Bureau of Statistics
NEEC	–	National Economic Empowerment Council
NGUMP	–	Natural Gas Utilization Master Plan
NOC	–	National Oil Company
Norad	–	Norwegian Agency for Development Cooperation
NPGIS	–	National Petroleum and Gas Information System
OGA	–	Oil and Gas Advisory Bureau
PAET	–	Pan African Energy Tanzania
PEPA	–	Petroleum (Exploration and Production) Act, 1980
PPRA	–	Public Procurement Regulatory Authority
PSA	–	Production Sharing Agreement
PURA	–	Petroleum Upstream Regulatory Authority
REA	–	Rural Energy Agency
SADC	–	Southern African Development Community
SCF	–	Standard Cubic Feet
SIDA	–	Swedish International Development Cooperation Agency
SMEs	–	Small- and Medium-sized Enterprises
SIDO	–	Small Industries Development Organization
STAMICO	–	State Mining Corporation
TANESCO	–	Tanzania Electricity Supply Commission
TCCIA	–	Tanzania Chamber of Commerce, Industry and Agriculture
Tcf	–	Trillion Cubic Feet
TECC	–	Tanzania Entrepreneurship and Competitiveness Centre
TEITI	–	Tanzania Extractive Industries Transparency Initiative
TIC	–	Tanzania Investment Centre
TIPER	–	Tanzania International Petroleum Reserves Limited
TLSSP	–	Tanzania Local Suppliers and Service Providers
TMAA	–	Tanzania Mining Audit Agency
TMC	–	Tanzania Mining Commission
TNBC	–	Tanzania National Business Council
TPDC	–	Tanzania Petroleum Development Corporation
TPSF	–	Tanzania Private Sector Foundation
TRA	–	Tanzania Revenue Authority
TZS	–	Tanzanian Shillings
UNDP	–	United Nations Development Programme
URT	–	United Republic of Tanzania
USD	–	United States Dollar
VETA	–	Vocational Education and Training Authority
VSO	–	Voluntary Service Overseas
WHT	–	Withholding Tax

Part I: Becoming a petro-state: An overview of the petroleum sector in Tanzania

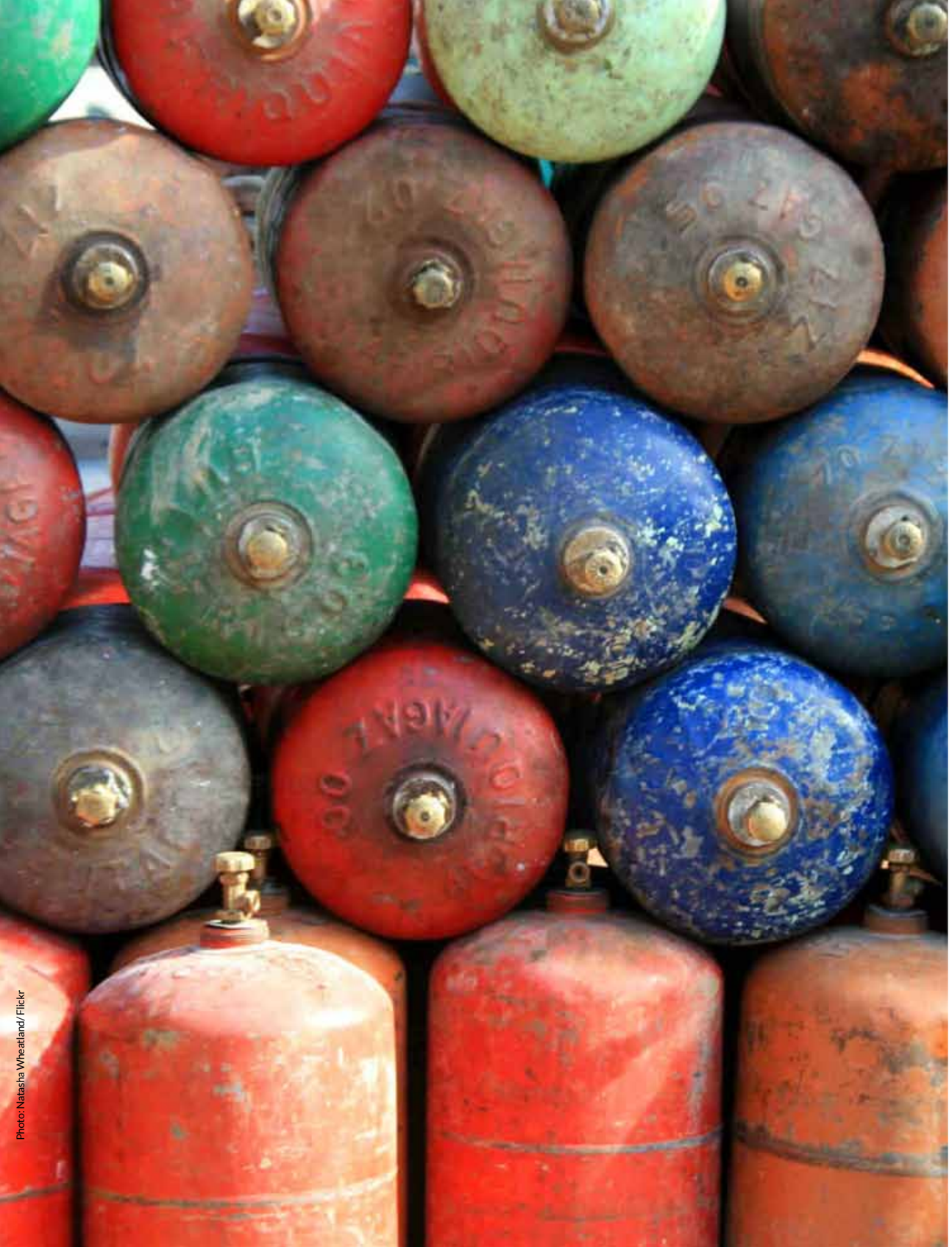

Photo: Natasha Wheatland/ Flickr

Over the last decade, large deposits of natural gas have been discovered off the southern coast of Tanzania. Substantial investments have already been made in drilling exploratory wells, however, lower global gas prices since 2014 and uncertainty about the implications of changes in policies and legislation in Tanzania have significantly slowed down offshore exploration activities. Currently, the Government and some international petroleum companies are negotiating terms to build a liquefied natural gas (LNG) plant, which will be central to the development of the country's gas sector. The decision to invest in extraction facilities therefore largely depends on the results of these negotiations.

In an effort to optimize future benefits from its natural resources, including gas, the Government of Tanzania is working to strengthen its resource governance infrastructure. Building strong institutions in the commercial, regulatory and policy areas will be pivotal for ensuring the sustainable development of the extractive sector. Improvement in the overall business environment in Tanzania is also required to develop the petroleum industry and leverage economic diversification. Establishing and maintaining trustworthy relations between the Government and international oil companies (IOCs) will be essential to expedite negotiations and ensure timely implementation of LNG projects. And for meaningful local content to take place, the development of indigenous human capital is critical. Given that the timing and volume of LNG exports and revenues are not predictable, unrealistically high public expectations have the potential to disrupt the economy and the country's peace and tranquillity. Developing the natural gas distribution infrastructure and exploring market potentials in the region (EAC and SADC countries) are also matters of urgency. Hence, all of these factors need to be prudently managed to minimize the risk of turning Tanzania's wealth of natural resources into a resource curse.

To inform Government efforts to further develop, manage and monitor Tanzania's emerging gas sector, this book analyzes the long-term process of how a country develops the institutions that govern resources (or fails to), the choices it makes in doing so, and the incentive structures governing those choices. In doing so, the book provides a detailed empirical account of the opportunities and challenges facing the country with respect to resource governance, revenue and expenditure management, local content development, and the integration of the petroleum sector in the rest of the economy.

To introduce the scope and context for the analysis, the opening part of the book includes two chapters. Chapter 1 outlines the overall purpose and structure of the book, including a summary of relevant literature on the resource curse. Chapter 2 then provides a brief overview of the history and current status of the petroleum sector in Tanzania.

1. Petroleum resources, institutions and politics: An introduction to the book

Odd-Helge Fjeldstad, Donald Mmari and Kendra Dupuy

Tanzania is currently on a path to becoming a petroleum producer. Huge deposits of natural gas have been discovered offshore the southern coast of Tanzania. The gas discoveries to date are of a scale far larger than anything seen in the mining sector. As a consequence, the country has the potential to become a large producer of gas and an exporter of liquefied natural gas over coming decades. With this comes expectations of significant petroleum revenues and prospects of natural gas-driven structural transformation, and improved economic and social conditions for the people of Tanzania.

The size of these offshore deposits has attracted the interest of international oil companies (IOCs), and substantial investments have already been made in drilling exploratory wells. Accordingly, the Government of Tanzania (GoT) is in the process of putting in place policies, laws and regulations to manage the petroleum sector, but the prospects for developing the country's offshore gas are, at present, uncertain. Lower global gas prices since 2014 and uncertainty related to the implications of changes in petroleum policies and legislation in Tanzania, have all but halted offshore exploration activities (see Pedersen & Bofin, 2019). The Government and the involved international oil companies (IOCs) are negotiating terms to build an LNG plant that will be central to the development of the entire offshore gas sector (Henstridge, 2018). The final decision to invest in extraction facilities will depend on the results of these negotiations and expectations about future gas prices.

The emergence of the petroleum sector adds to the country's landscape of natural resource abundance. In addition to its extensive tracts of agricultural land, forests and national parks, Tanzania is rich in metals, industrial and fuel minerals. Deposits include gold, iron ore, nickel, copper, cobalt, silver, diamond, tanzanite, limestone, soda ash, gypsum, helium, phosphate, gravel and sand, graphite, coal and uranium.[1] By mid-2018, minerals constituted 35% of Tanzania's total export value, of which the lion's share comes from gold (Bank of Tanzania (BoT), 2018). The country is the fourth largest producer of gold in Africa after South Africa, Ghana and Mali. But, so far, Tanzania has benefitted very little from its wealth of resources. In particular,

1 "Tanzania Mining" 2019. Retrieved from https://www.tanzaniainvest.com/mining on 30 July 2019.

the gold mining boom, which began around 1999, has failed to produce significant structural change and diversification of the economy (Roe, 2017, p. 1).

The country's own experiences from the mining sector (Curtis & Lissu, 2008; Lange & Kinyondo, 2016; Jacob & Pedersen, 2018) and lessons from other petroleum-producing countries (Ross, 2015; Venables, 2016) show that the development and management of extractive natural resources can be very challenging. Indeed, many resource-rich developing states have experienced a phenomenon commonly known as the 'resource curse', whereby the hoped for benefits from a country's natural endowments turn out to be destructive for social, economic and political progress.

But, what is the resource curse? And how and why does it emerge? And, most importantly, how can Tanzania avoid the resource curse so as to secure long-term benefits for its population? The research papers in this book seek to shed light on these questions and provide evidence-based recommendations for policy makers as they negotiate the path to becoming a new petro-state. From the outset, it is critically important to understand what the resource curse is so that leaders in government, political parties and civil society not only recognize and avoid potential pitfalls but also take sure and confident steps to build economic resilience and broad-based prosperity.

What is the resource curse?

Many countries are blessed with abundant quantities of high-value natural resources such as oil, gas, minerals and metals. Scholars in the early development economics literature, such as Rostow (1961) and Krueger (1980), argued that natural resource endowments were key drivers of economic development, viewing resources as the "basis for national prosperity, power, and wealth" (Kneese, 1988, p. 281). After all, the ability to develop new forms of technology to exploit natural resources, like water and coal, sparked and accelerated the Industrial Revolution and fuelled the later growth of Soviet and Chinese powers.

But not every country has managed to use its resource wealth to create prosperous, peaceful societies. Instead, many countries have experienced the so-called 'resource curse', wherein natural resource abundance results in deepened poverty, non-democratic government and violent conflict – also known as the "paradox of plenty" (Karl, 1997). Economists turned their attention to this puzzle in the 1980s (Wheeler, 1984), and the topic received heightened attention by social scientists with a 1995 paper by the economists Jeffrey Sachs and Andrew Warner. Observing that hydrocarbon-rich states (i.e., those with abundant petroleum and mining resources) were often governed by non-democratic regimes and were experiencing (or had experienced) violent conflict, political scientists began to investigate the political and social outcomes of both resource abundance and scarcity (Ross, 2001, 2015).

Much of the ensuing scholarship on the resource curse has focused on the economic, political and social effects of petroleum (oil and gas) and minerals. Of these, oil has dominated research. Research to date has identified a number of reasons why low-income countries that are heavily reliant on abundant, non-renewable resources fail

to grow rich from their resource wealth. The reasons identified include the volatility of commodity prices on world markets, a failure to diversify economically, and a crowding out of markets that are key to growth, such as manufacturing (Harding & Venables, 2016; Frankel, 2010; Collier, 2007). Resource abundance—particularly in oil—can also give rulers the means to repress dissent or buy elite and popular compliance, rather than seeking popular support at the ballot box (Ross, 2001; Luong & Weinthal, 2006). Finally, resource wealth can trigger armed conflict for reasons of "greed" or "grievance" (Collier & Hoeffler, 2005; Humphreys, 2005; Ron, 2005). Citizens may fight to wrest control of resource revenues away from the government for personal benefit, or to voice anger over the government's mismanagement of resource revenues.

Mismanagement of resource revenues is crucial for explaining why each of these negative outcomes occurs. The extraction and production of natural resources, such as oil, gas, mining, forests and hydropower, often create (or have the potential to generate) large revenues for the governments that control these resources. Yet, repeatedly, politicians fail to utilize revenues in ways that would make their societies richer, freer and more peaceful. They neglect investments in sectors such as education or manufacturing (Gylfason, 2001), and instead choose to use resource revenues to fund economically unproductive activities. They misuse revenues to keep themselves in power and/or line their own pockets, fuelling popular dissent and stifling political development (Humphreys, Sachs, & Stiglitz, 2007). Often politicians also fail to ensure that those who live in resource-producing areas benefit financially from the riches extracted from their lands and to compensate communities for the social, economic and environmental costs of doing so. Consequently, a stark imbalance is created between those who benefit and those who suffer from resource extraction, exacerbating local-level inequalities and grievances that can ultimately cause social upheaval.

Recent research shows that the resource curse can manifest itself long before actual extraction and production begins, a phenomenon known as the 'pre-source curse' (Dupuy & Katera, 2019). This is one of the core findings from the research reported in this book, which has followed developments in Tanzania from the early discoveries of offshore gas. The pre-source curse is inflicted during the time period between the discovery of a major resource endowment and its production, which can last anywhere between five to fifteen years. It results from too-high expectations about the amount of future revenues that will flow from the resource when extracted and commercialized (Cust & Mihalyi, 2017). It strikes when large resource discoveries trigger exuberant government spending, high debt accumulation and reduced savings (Cust & Mihalyi, 2018; Collier, 2007). Political effects can include increased corruption, reduced transparency in natural resource management and the rollback of democratic rights and freedoms (Frynas, Wood, & Hinks, 2017). Social effects can include the outbreak of violence in the form of protests, riots and even armed conflict, as well as negative social changes that may come about from the immigration of workers to build the infrastructure needed for resource production (Must, 2018; Karl, 2004). Therefore, building strong institutions, even before actual extraction starts, will be a major task for the Tanzanian government.

Turning the curse into a blessing: How can Tanzania optimize the benefits from the country's natural resources?

Over the last few years, scholars have increasingly come to understand that it is not the existence of mineral or resource wealth or scarcity per se that causes resource curse symptoms or outcomes. Rather, the culprits are institutional configurations related to ownership and governance of resources (Luong & Weinthal, 2010). In other words, resources themselves do not cause good or bad outcomes for countries. It is the underlying political institutions of a resource-rich society that determine the outcomes of resource wealth, including the institutions set up to manage resource wealth (Menaldo, 2016; Atkinson & Hamilton, 2003; Mehlum, Moene, & Torvik, 2006; Haber & Menaldo, 2011; Heilbrunn, 2014).

Institutions are here broadly defined as the formal and informal social rules for how people should behave, including sanctions for breaking the rules (North, 1990; Ostrom, 2005). For natural resources, institutions determine how resources are managed, whether to the benefit of political elites or citizens. Institutions provide the rules for accessing and using resources, and should ideally prevent the 'tragedy

FIGURE 1.1
Map of southern coast of Tanzania showing natural gas fields in commercial production and associated gas infrastructure.

of the commons' – the over-exploitation, and ultimately, the exhaustion of a common pool resource for individual gain at the expense or neglect of societal well-being or benefit. Examples of resource-related institutions include the cabinet, the parliament, political parties, regulatory agencies, treaties, contracts and agreements, laws and norms. Thus, the critical question is how resource-rich countries can design institutions that safeguard them against the resource curse and ensure that natural resources are turned into development by translating the revenues generated through resource exploitation and via commodity value chains into inclusive economic growth.

Generally, weak institutions fail to sufficiently constrain political elites from using resource revenues for private ends, rather than the public good. Instead, weak institutions create incentives and opportunities for individuals to engage in rent-seeking behaviour and to use resource revenues for political patronage and to finance conflict (Kolstad & Søreide, 2009; O'Higgins, 2006; Leite & Weidmann, 1999). In the absence of robust institutions, individuals are likely to focus their efforts on finding ways to access resource revenues to line their personal pockets or to buy political support in order to stay in power, rather than engaging in other, more economically and socially productive activities. As Menaldo (2016) argues, states with weak institutions are more likely to heavily rely on resource exploitation for revenue generation, since these states lack the institutional foundations critical for economic development like inclusive property rights and tax collection infrastructure. And yet, even resource-rich countries, whose institutions were weak prior to the growth of extractive industries, are not precluded from changing course through the creation of new and better institutions, including entities designed to more fairly distribute the costs and benefits of resource extraction and production in the country.

This insight about the importance of institutions has generated a substantial literature on the ability of resource governance institutions and broader types of political, economic and social institutions to manage and prevent resource-related conflicts (Atkinson & Hamilton, 2003; Mehlum et al., 2006; Haber et al., 2011; Heilbrunn, 2014). The types of broader institutions that seem to influence economic, political and social outcomes in states with either resource abundance or scarcity include those that successfully work to extend the rule of law, improve the quality of the bureaucracy, reduce the level of corruption, and decrease the risk of investment expropriation and contract repudiation.

Purpose of the book

Much of the literature on the resource curse is either backward-looking or static, explaining cross-country variations in the existence of the resource curse. It does not focus sufficiently on explaining how the curse comes about in some places, but not in others. In other words, research on the resource curse has not examined the process whereby the resource curse emerges. This is the central purpose of this book. It aims to analyze the long-term process of how a country develops the institutions that govern resources (or fails to), the choices it makes in doing so, and the incentive structures underpinning those choices.

Research to date clearly shows that institutions matter in determining why some countries experience the resource curse while others do not, but what specific types of institutions matter and how are they created? These questions are also addressed. Rather than just saying that "institutions matter," the authors examine specific types of institutions and their creation, and how historical pathways are established and change over time. In this way, the book seeks to contribute to understanding how the resource curse comes about.

The book analyzes the long-term process of how a country develops the institutions that govern resources, the choices it makes in doing so, and the incentive structures underpinning those choices.

We examine a country in action. Tanzania is in the process of developing institutions for petroleum governance, including regulatory agencies, legislation, treaties and contracts. A critical question is how the Government of Tanzania can design institutions that safeguard the country against the resource curse, and ensure that natural resources are translated into inclusive development by managing revenues generated well, investing in economic and social infrastructure that are fundamental to economic growth and for diversifying the economy. By focusing on Tanzania, the book provides a detailed empirical account of key prospects for and the challenges facing the country with respect to governing resource wealth.

While much has been written about 'right' policies and legislation (see for example, Humphreys, Sachs & Stiglitz, 2007; Daniel, Keen & McPherson, 2010), there is growing recognition that implementation strategies have received less attention (Weinthal and Luong, 2006). Although there is ample research on petroleum resource management (see, for example, Addison and Roe, 2018), not many of these studies provide concrete answers to the question of how the implementation mechanisms and the institutions involved react to the interplay between market signals, public expectations and domestic policies, and which roles each of these play in decision making.

There has been much emphasis on what should be done to prevent the resource curse from occurring, partly based on so-called 'best practices' from other countries. However, this book argues that 'best-practice' institutions are, almost by definition, non-contextual (see Rodrik, 2008). Instead, appropriate institutions for developing countries are often 'second-best' institutions, i.e., those that take into account context-specific market and government constraints that cannot be removed easily. Such institutions will often diverge greatly from best practice. Therefore, the book pragmatically assesses what can be done with respect to the choice of regulatory regime, legislation, local content, tax and fiscal arrangements, given the political, institutional and economic constraints prevailing in Tanzania.

Structure of the book

To contextualize these constraints and changes over time, Chapter 2 provides a brief overview of the evolution and current status of the petroleum sector in Tanzania. The articles in the book are organized in three main topical parts:

Part II: The legislative framework and fiscal management of the petroleum sector for stability and sustainability (Chapters 3 to 9)

Part III: Local content policies and sector linkages in the extractive sectors (Chapters 10 to 14)

Part IV: The political economy of policy making in the petroleum sector (Chapters 15 to 19)

The papers within each part examine the linkages between: (a) petroleum production, investment and local content; (b) trajectories in the wider economy, such as government revenue and expenditure; and (c) changes in policy and legislation over time; and (d) public expectations and trust in key institutions.

This broad outlook enables the analysis of the complex relations between market and non-market institutions, governance systems and the resource curse.

The concluding Chapter 20 provides a summary of the prospects for and the challenges facing the development of Tanzania's emerging offshore petroleum sector. If Tanzania is to avoid the paradoxical situation experienced by many petro-states—that an abundance of natural resources leads to lower levels of economic growth and human development, greater inequality and civil strife—then a longitudinal perspective is necessary as changing market signals and public expectations are essential inputs to prudent policy-making processes.

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2. The evolution and current status of the petroleum sector in Tanzania

Donald Mmari, James Andilile and Odd-Helge Fjeldstad

The first discoveries of natural gas in Tanzania were made in 1974 at Songo Songo Island in Lindi Region and in 1982 at Mnazi Bay in Mtwara Region. Commercial production from these areas started in 2004, mainly for domestic electricity generation and some industrial use. Since 2010, large deposits of natural gas have been discovered off the southern coast of the country, which have attracted the interest of international petroleum companies.Substantial investments have already been made in the exploration phase, however, the final decision to invest in extraction facilities largely depends on the outcome of the ongoing negotiations between the government and the international oil companies, and the expected future prices for petroleum commodities, including natural gas. This chapter examines the evolution of the petroleum sector in Tanzania, focusing particularly on the current state of the industry, its contribution to the economy, and the prospects for and challenges facing the country in becoming a new petro-state.

A short history of petroleum exploration in Tanzania

Exploration of petroleum resources in Tanzania began in 1952 when the British colonial administration awarded concessions for the entire coastal basin, including the islands of Zanzibar, Pemba and Mafia to British Petroleum (BP) and Shell. After fruitless drillings, BP and Shell relinquished the concessions in 1964, the same year that Tanganyika and Zanzibar formed a political union to become the United Republic of Tanzania.

In 1969, the Tanzania Petroleum Development Corporation (TPDC) was formed. The first production sharing agreement (PSA) was signed with Azienda Generali Italiana Petroli (AGIP) on the former BP/Shell concessions. In 1974, AGIP, in partnership with the American Oil Company (AMOCO), discovered natural gas at Songo Songo Island, and in 1982 at Mnazi Bay (see Figure 2.1). AGIP and AMOCO surrendered the concessions as the discoveries were deemed too small for commercial development (Pedersen et al., 2016). The relinquishment was also propelled by the fact that, during this time period, most international oil companies were looking for oil, not natural gas.

From 1976 to 1983, TPDC drilled eight appraisal wells at Songo Songo. Despite proving the existence of more gas, the field could not be developed due to the lack of a local gas market, inadequate infrastructure, and limited gas reserves for commercial export. To catalyse the search for petroleum, in 1980 the Government of Tanzania (GoT) enacted the Petroleum (Exploration and Production) Act 1980. The Act repealed the Mining (Mineral Oil) Ordinance 1958 enacted by the British colonial administration and established a clearer legal and regulatory framework for oil exploration and production, as well as safety clauses for contractors with respect to nationalization. It stipulated that all petroleum resources belonged to the state, but conferred on the Minister for Energy the right to enter into agreements with IOCs. Thus, the Act provided security for potential investors, which led to as many as nine IOCs to acquire additional exploration blocks onshore in mainland Tanzania.

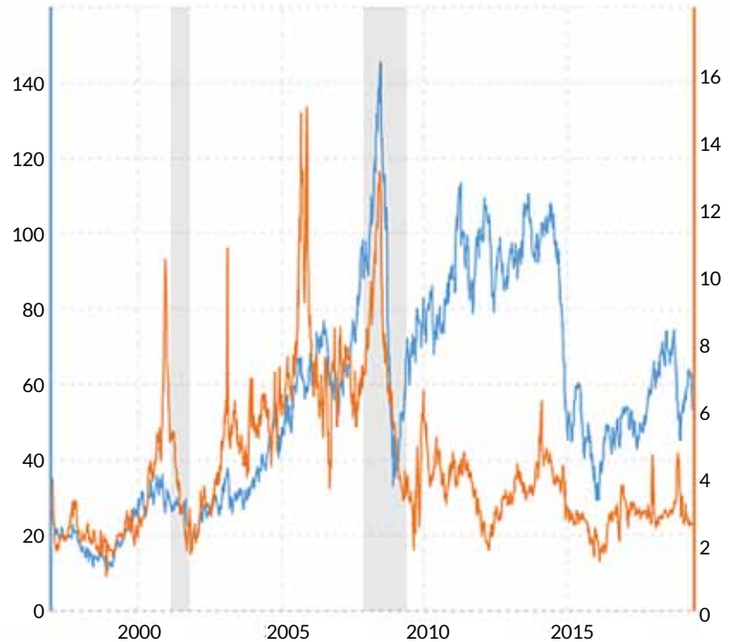
These activities stalled during the 1990s due to the volatility of petroleum prices globally. Despite the global turmoil, in 1995 the Government, through TPDC, entered into production sharing agreements (PSAs) with Tanganyika Oil Company, ExxonMobil and Kuwait Foreign Petroleum Exploration Company to undertake petroleum exploration.

In 1999, the UK-based Western Geophysical found hydrocarbon traces in the Indian Ocean off the southern coast of Tanzania. As a consequence, from 2000, exploration campaigns moved offshore. In 2004, the first deep-sea licensing round was done, awarding PSAs for offshore blocks. In 2010, BG/Ophir made a gas discovery at Block 4, equivalent to 1.8 trillion standard cubic feet (Tcf). In March 2012, Statoil (now Equinor) and ExxonMobil made the biggest gas discovery offshore in Block 2, equivalent to 6 Tcf. These discoveries galvanized the entry of more IOCs into the sector, and became a turning point in the history of petroleum exploration in Tanzania. In sum, over the span of nine years from 2004 to 2013, 42 exploratory wells were drilled. While no oil has been discovered so far, by the end of 2017 about 57.54 Tcf of natural gas, equivalent to 10 billion of barrels of oil has been discovered (URT, 2018). By the end of that year, 12 companies were operating on 11 PSAs.

To date, four offshore licensing rounds have been completed, which have attracted some of the larger IOCs, but with different results in terms of new PSAs (Pedersen & Bofin, 2019). In the fourth licensing round in 2014, five bids were received based on the 2013 model production sharing agreement (MPSA), but no PSA was concluded (see Chapter 5). Some observers blamed the terms of the 2013 MPSA for the bad outcome, but the global oil and gas industry at that time was already experiencing oversupply and falling prices.

In recent years, the dramatic decline in oil and gas prices has stalled exploration activities and reduced the number of active PSAs from 25 in 2013 to 11 in 2017. As Figure 2.2 illustrates, prices for both crude oil and natural gas started to decline from their peak during the second half of the 2000s and have remained generally low.

FIGURE 2.1
Crude oil (Newmex) and natural gas (Henry Hub) spot prices, 2000-2015



Notes: Left axis in blue shows crude oil price in USD per barrel; right axis in brown shows natural gas price in USD per MMBtu
Source: https://www.macrotrends.net/2500/crude-oil-vs-natural-gas-chart

The present status of the petroleum industry in Tanzania

To date, only part of Tanzania's onshore gas has been developed for power generation and industrial use in the domestic market. After the discoveries of gas in 1974 and 1982, the Government attempted to commercialize these reserves. The first attempt was in 1982 when a study recommended that natural gas could be used for producing methanol and fertilizer for export (World Bank, 1984). The Kilwa Ammonia Company Ltd. (KILAMCO), which was 74% owned by TPDC and 26% by Agrico, a U.S. company, was founded to implement the project. The project, however, failed due to the collapse of global fertilizer prices. In 1989, another study suggested that natural gas could be used for power generation and as an alternative fuel for industries in Dar es Salaam. These findings were further supported by a World Bank study in 1991, which also recommended exporting power or gas to Kenya (World Bank, 1991). With the support of the World Bank and other multilateral institutions, the Songo Songo Gas Development and Power Generation Project was conceived in 1991 (World Bank, 2001, 2011). Songas, the implementing entity of this gas-to-power project, benefitted from government loans from the World Bank, the International Development Association (IDA),

the European Investment Bank (EIB), and the Swedish International Development Cooperation Agency (Sida).

The Songo Songo project is a public-private partnership that came on-stream in 2004. This initiative comprises a gas processing plant at Songo Songo Island with a throughput capacity of 70 million standard cubic feet (MMscf) and a 232 km gas pipeline from Songo Songo to Dar es Salaam with maximum capacity of 105 MMscf per day (MMscfd). It also includes a 112 megawatt (MW) gas-fired power plant at the Ubungo complex in Dar es Salaam and a 16 km gas pipeline from Ubungo to Twiga Cement Plant at Wazo Hill, north of the city centre. Tanzania owns a 39% stake in the project through TPDC and the Tanzania Electric Supply Company (TANESCO). Songas' capacity was later increased from 112 MW to 180 MW.

The success of this project triggered the development of the Mnazi Bay gas field by the international energy producer, Artumas Group. As a result, the Mtwara Energy Project was developed in 2006 to provide a reliable and affordable electricity supply to Mtwara and Lindi regions, which, at that time, relied on off-grid, diesel-generated power. The project consisted of a gas processing plant with a maximum throughput capacity of 10 MMscfd at Mnazi Bay, a 27 km long gas pipeline from Mnazi Bay to Mtwara Municipality with a maximum capacity of 70 MMscfd, and a 18 MW gas-fired power plant. At present, the project is owned and operated by Maurel & Prom, except for the power plant, which is owned by TANESCO.

Following the increased demand for natural gas, the Government decided in 2012 to invest in a USD 1.2 billion gas infrastructure project. The project involved the construction of two processing plants with a combined throughput capacity of 350 MMscfd at Madimba village in Mtwara and at Songo Songo Island, and a 542 km gas pipeline from Mtwara to Dar es Salaam with a design capacity of 1,000 MMscfd. The main pipeline from Madimba measures 36 inches (91 cm) in diameter. At Somangafungu, in Lindi Region, the main pipeline is joined by a smaller 24 inch (61 cm) pipeline delivering natural gas from Songo Songo. The construction contract was awarded to China Petroleum and Technology Development Company, a subsidiary of China National Petroleum Company, with a USD 1.2 billion concessional loan from Exim Bank of China. The construction commenced in June 2013 and was completed in October 2015. The project is exclusively owned by the Government of Tanzania.

Due to the continued volatility in oil and gas prices, and concerns related to changes in the extractive sector policies and legislations since 2015, the country's offshore discoveries, which represent about 80% of Tanzania's natural gas reserves, are yet to be developed. Negotiations between the Government and IOCs are ongoing for an investment of about USD 30 billion in a liquefied natural gas plant. If developed, the project is expected to bring substantial revenues to the Government from exports of LNG, along with additional gas for use in petrochemical industries, power generation and for industrial and domestic use.

Contribution of the petroleum sector to the economy

The contribution of the onshore gas-producing fields in Songo Songo and Mnazi Bay to Tanzania's economy is notable. Gas use in the production of power has improved the security of power supply. The industry has created jobs and enabled technological transfer with increased foreign direct investment (FDI), particularly between 2010 and 2013. FDIs to the power and petroleum industries increased from USD 1 million in 2008 to USD 1,145 million in 2012 (URT, 2013). In terms of electricity, the Songo Songo and Mnazi Bay gas fields together accounted for 55% (812.32MW) of the total power supplied to the national grid (see Table 2.1). Natural gas has contributed to reducing the country's dependence on the more volatile hydropower and heavy oil fuel plants. The industrial use of gas has also contributed to improve production efficiency in terms of both costs and reliability (TPDC, 2018).

TABLE 2.1
Power generation mix in Tanzania, 2018

Energy source	Installed capacity (MW)	Contribution to mix
Total hydro plant	567.70	39%
Total gas plant	812.32	55%
Other fossil fuels	77.04	5%
Total biomass	10.50	1%
Total system	1,467.56	100%

Source: TANESCO (2018)

The use of natural gas for domestic purposes is still low, but with high potential for expansion. Efforts by the Rural Energy Agency (REA) to connect rural households with electric power resulting from increased power supply aims to combat rural poverty. The demand is huge since about 66% of the population live in rural areas.

The replacement of imported petroleum products with domestic natural gas has helped the country save foreign currency, improved the balance of trade, and freed some foreign currency earnings for other development activities. Between 2004 and 2018, the overall savings to the economy resulting from the use of natural gas were estimated at USD 11 billion (TPDC, 2018). In addition to reducing costs, the natural gas sub-sector has also raised government revenues. In 2011 and 2012, for example, the petroleum industry's contribution to total government revenues was about 2% (Pedersen & Bofin, 2015), but in recent years, this share has decreased (URT, 2018). The petroleum industry and its sub-sectors have also helped to create jobs in Tanzania. In 2014, mining and quarrying operations (including the petroleum industry) employed 218,024 people, of whom 20% were women (URT, 2015) and contributed about 4.8% to the country's gross domestic product (GDP) (URT, 2018).

Upstream, midstream and downstream: Major entities in the value chain of the petroleum industry in Tanzania

Operations in the petroleum industry are categorized into upstream, midstream and downstream. In simple terms, upstream operations encompass the exploration for hydrocarbon reserves and bringing those resources to surface when discovered. Midstream operations involve the storage and transportation of these raw materials from the wellhead to refineries, and downstream activities include the refining of crude oil and the processing or purifying of raw natural gas into final products for consumption.

Since 1980, the national oil company, Tanzania Petroleum Development Corporation (TPDC) has been the sole licence holder for upstream operations. TPDC also plays an important role in midstream and downstream operations, however, the liberalization of downstream operations in 2000 diminished the role of TPDC in that segment. In 2009, TPDC formed the Commercial Petroleum Company of Tanzania (COPEC) as a subsidiary to engage in downstream activities, particularly in managing the petroleum strategic reserve that aims to guarantee security of supply in the country. COPEC was subsequently rebranded as TANOIL in 2015 when it became operational. In the midstream and downstream gas sub-sectors, TPDC functions through its subsidiary GASCO. This subsidiary operates and maintains the two natural gas processing plants at Songo Songo and Madimba, two natural gas receiving stations at Somanga Fungu in Lindi and Kinyerezi in Dar es Salaam, as well as the pipeline from Mtwara to Dar es Salaam.

In May 2017, in a bid to further expand TPDC's scope of operations, the governments of Tanzania and Uganda signed an inter-governmental agreement to facilitate the implementation of a USD 3.54 billion project. The project involves construction of a 1,443 km pipeline to transport crude oil from the Albertine Graben area (Kabaale) in Uganda to the international market through the port at Tanga in northeast Tanzania. Through TPDC, the GoT has a call option to invest as a shareholder in the company that will operate the pipeline. Uganda and Tanzania are now negotiating a host government agreement (HGA) with a consortium of IOCs that are developing the Ugandan oil reserves, including Total, Tullow Oil and CNOOC Uganda Ltd.

Companies in upstream operations today are TPDC, BG/Shell, Equinor, ExxonMobil, Ophir, Pavilion Energy, Dodsal, Pan African Energy Tanzania (PAET), Maurel & Prom, Afren (T) Ltd, Heritage, Ndovu Resources and Aminex. According to the Petroleum Act of 2015, TPDC is the custodian of petroleum licences for exploration and development in the country and has exclusive rights to participate in all petroleum projects in the value chain by holding at least a 25% shareholder stake.

Prospects and challenges for the petroleum sector in Tanzania

With more than 70% of its explorable basins still unexplored, Tanzania has good geological prospects. To unlock this potential, further exploration is required, and, in turn, attracting these investments will require a favourable legal, regulatory and institutional environment. The introduction of new natural wealth laws in 2017 has raised concerns among investors. The Government's intention, however, has been to ensure that the investors receive a reasonable return on their investments, and that the government optimizes its take for the benefit of the citizens. Transformation of the country's hydrocarbon resources into financial resources may not be possible without IOCs. Yet, over-reliance on IOCs financially and technologically may infringe the host country's sovereign rights over the resources. For Tanzania to have greater control of decisions regarding timing and production, TPDC needs to be sufficiently capitalized and resourced with adequate and skilled personnel.

The LNG project has potential to transform the Tanzanian economy. However, the process of extracting offshore gas is complex, technically challenging and costly. Delays in reaching final investment decisions between the Government and the IOCs, oil price volatility, and the increasing saturation of global LNG markets may weaken the value of Tanzania's prospective gas exports (BMI, 2016). The changing position of the United States from being a net importer of petroleum products to becoming a net gas exporter could also dent the prospects of the LNG project. Nonetheless, the IOCs have confirmed their willingness to inject about USD 30 billion in the project, conditional on a conducive business environment. Thus, a window of opportunity is still open for Tanzania to tap into global gas markets. The rapidly evolving economic environment in the region, including the EAC and SADC countries, are likely to spur demand for natural gas. Thus, the IOCs might also consider the regional market as an opportunity for monetising the gas reserves.

Building strong institutions in the commercial, regulatory and policy areas, is pivotal to ensuring sustainable development of Tanzania's petroleum sector.

The recent offshore gas discoveries have sparked expectations among many Tanzanians that the economic outlook will change instantaneously (see also Chapters 18 and 19). With the intent to increase its control, the Government has overhauled policies and the legal framework that govern the petroleum industry (Lee & Dupuy, 2017; and Chapter 3). By contrast, the industry's perception is that excessive government regulation could prove to be overly bureaucratic and obstructive (Lewis, 2018). In advance of the final decision to build the LNG plant, the timing of future revenue inflows remains uncertain. Regardless of how quickly the current deadlock between the Government and the IOCs is broken, an investment decision is not likely to be reached before 2022, with LNG exports not expected until the end of the decade.

The development of the natural gas sector is also constrained by the underdeveloped domestic gas market caused by the country's limited industrial base and shortage of gas infrastructure. The poor industrial base implies that, at present, Tanzania can only make use of gas to transform the economy, create jobs and contribute to poverty alleviation to a limited extent. In 2016, the Natural Gas Utilisation Master Plan (NGUMP) was prepared to articulate uses of natural gas in Tanzania.

To vitalize industrial growth, TPDC envisions supplying natural gas to several other regions in addition to Dar es Salaam over the medium term. Realizing this vision will require new policy measures and constructive dialogue between the Government and investors on the financing of the gas distribution infrastructure, as well as determining tariffs for different domestic consumers of natural gas. Furthermore, the development of the petroleum sector requires specialized skills across the industry value chain. At present, such skills are scarce in supply, hence undermining the employability of Tanzanians in the petroleum industry. A strategy to develop such skills is required (see Chapters 10, 12 and 14).

The limited capacity of key institutions, including TPDC, TANESCO and the Petroleum Upstream Regulatory Authority (PURA), also constrains the development of the petroleum industry. For instance, over-reliance on government subventions makes it difficult for TPDC to meet its investment targets on time. Like most public institutions fully funded by the government, PURA is still in its infancy and not financially independent. The untimely release of funds can result in the regulator being unable to discharge its functions as planned or with delays, which can undermine its credibility. At present, TANESCO consumes almost 80% of the daily gas production. TANESCO's inability to pay the gas supplier on time makes its creditworthiness questionable and affects the desire of IOCs to explore and extract more gas.

Concluding remarks and policy implications

Improvement in the overall business environment in Tanzania is required to develop the petroleum industry. Building strong institutions in the commercial, regulatory and policy areas is also pivotal to ensuring sustainable development of Tanzania's petroleum sector. The Government's blueprint for regulatory reform is already in place. It provides guidelines and commitments to eliminate policy, regulatory and institutional constraints to improve the business environment and investment climate. To expedite negotiations and ensure timely execution of the LNG project, it is essential to build trust between the Government and IOCs. The Government expects a fair deal that will optimize the government's share of revenue and benefits to its citizens. The IOCs, on the other side, require a conducive business environment, including sanctity of contracts and agreements, and a stable and predictable legal, fiscal and commercial framework. Trustworthy relations are required to achieve an outcome that ensures mutually favourable returns for the IOCs on the one hand, and the Government and people of Tanzania on the other.

Unrealistically high public expectations can also disrupt the economy and the country's peace and tranquillity (see also Chapters 18 and 19). Since the timing of LNG exports and revenue flows are unpredictable, public expectations must be well managed to minimize the risk of turning Tanzania's resource wealth into a resource curse. To effectively harness the socio-economically transformative potential of natural gas, efforts to develop gas-intensive industries, such as petrochemicals and fertilizers, and to build the natural gas distribution infrastructure need to be prioritized. To optimize national benefits derived from the industry, development of indigenous human capital is also crucial for meaningful local content to take place.

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PART II: The legislative framework and fiscal management of the petroleum sector

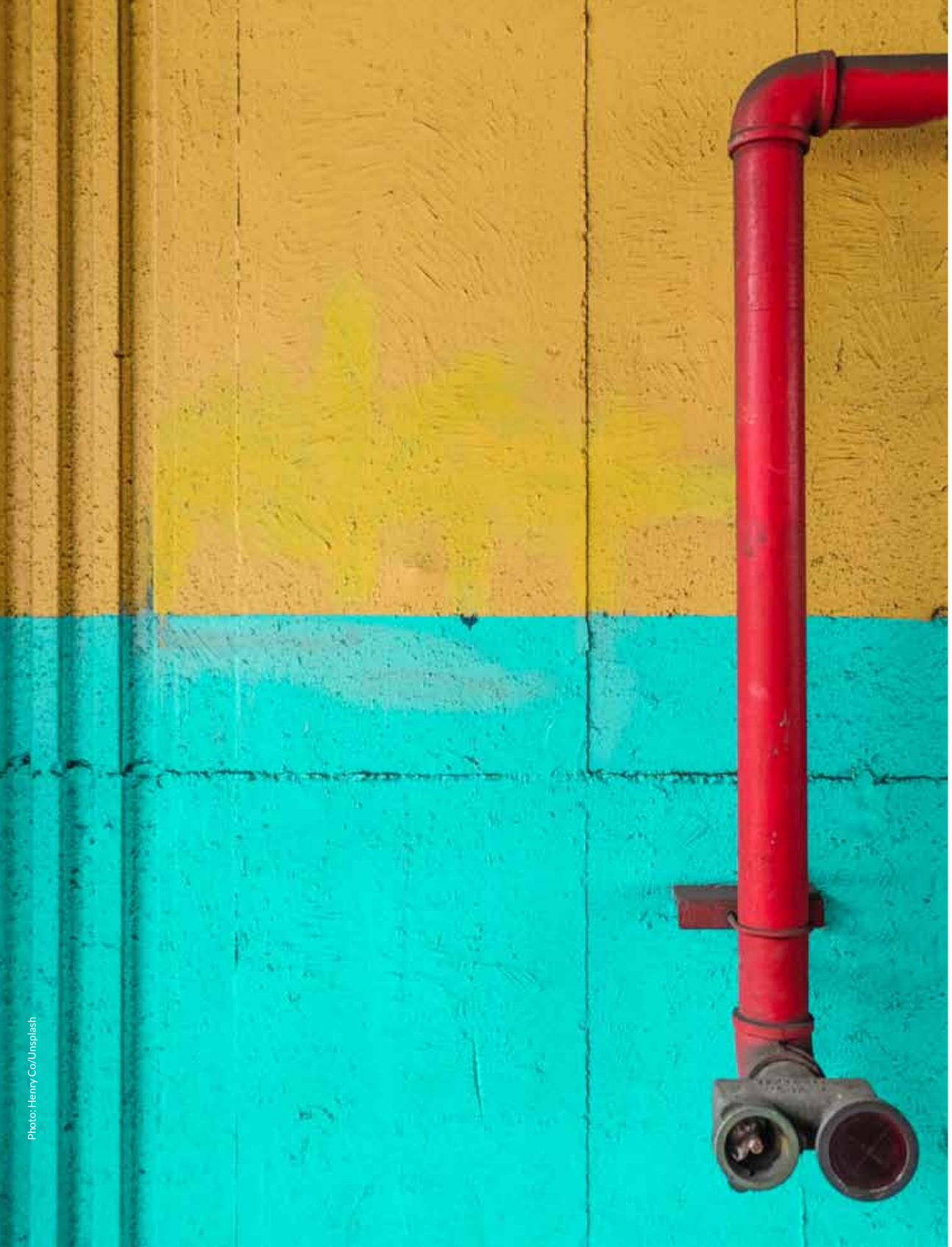


Photo: Henry Co/Unsplash

Tanzania has recently reviewed and developed new policies, and legal and institutional frameworks to manage its petroleum resources. Development of regulations to support the enacted laws is an ongoing process. Some institutions, policies and legislation are in their formative stages, and the mandates and responsibilities of domestic stakeholders are overlapping, unclear and/or conflicting. In addition, a number of international institutions, including the World Bank, the International Monetary Fund (IMF) and the African Development Bank (AfDB), are engaged in providing policy advice and technical assistance related to Tanzania's petro-boom (see, for instance, DAI, 2013).

The appropriate legislative and fiscal frameworks for the petroleum sector are vitally important for the stability and sustainability of the sector, and for the economy more broadly. Therefore, this part of the book examines government efforts to establish the legal and fiscal architecture to manage the country's petroleum resources. The seven papers in this part focus on how and why the exploitation of petroleum resources may effect:

Intra-governmental fiscal relations, with a particular focus on policy consistency, decision making processes and exchange of information between the involved ministries and public agencies.

Public-public and public-private sector interactions, including lobbying, in shaping petroleum revenue legislation, regulatory frameworks and public investment decisions.

Citizens' willingness to pay, and the government's willingness to enforce tax payments over time.

Chapters 3 and 4 provide overviews of the legislative framework and fiscal system related to the petroleum sector in Tanzania, respectively, and how they have evolved over time, while Chapter 5 takes a more detailed look into the country's fiscal regime and its suitability. Chapter 6 then highlights the fundamental aspects of investment and revenue governance for negotiating Tanzanian's natural gas future and the ongoing debate on how future petroleum revenues should be spent. Some politicians advocate, for instance, that current budgetary gaps should be filled by spending expected future revenues in advance. The handling of public expectations is a key issue for the expenditure side of the national budget in the context of a resource boom.

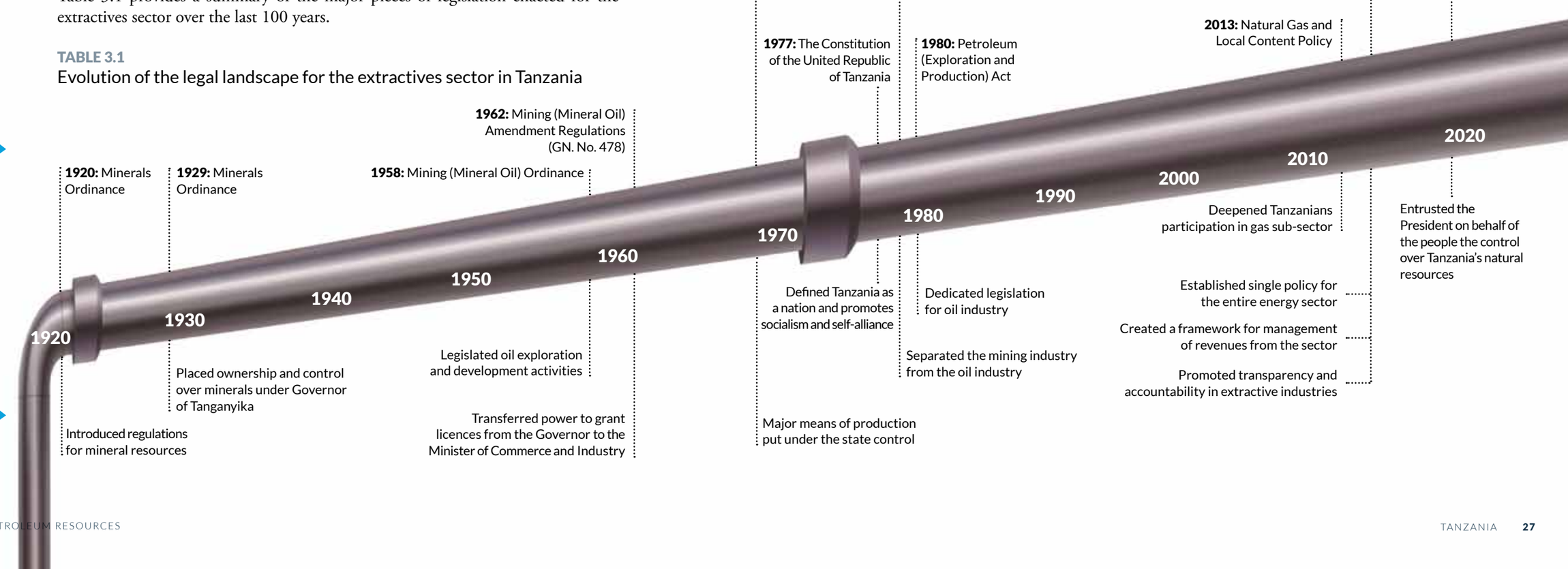
Chapters 7 and 8 discuss issues related to management of gas revenues in the context of uncertainty and the taxation of non-resource sectors in resource rich settings. Notably, the Tanzania Revenue Authority (TRA) is not only concerned with the fiscal regime for extractive industries, but also how public expectations for large, future petroleum revenues may influence and undermine citizens' willingness to pay tax over time, i.e., do the expected petroleum revenues challenge the ordinary (non-petro) tax system? Chapter 9, the last in this part of the book, identifies and discusses key aspects for deciding whether or not Tanzania should establish a petroleum fund.

3. The legislative landscape of the petroleum sector in Tanzania

James Andilile, Odd-Helge Fjeldstad and Donald Mmari

This chapter documents the evolution of laws related to the petroleum sector in Tanzania since independence. The legislation provides the framework of rules governing the industry, including rights and obligations of the investors and the host country, and mechanisms that guarantee transparency and accountability. The boom in exploration activities that led to major offshore gas discoveries in 2010 and 2012, has slowed down as a result of both uncertainties in the global petroleum market and in the fiscal regime caused by recent legislative changes. This analysis argues that there is a need to revise the legislative framework to reduce uncertainties for investors without compromising benefits to the host government and Tanzania's citizens. Table 3.1 provides a summary of the major pieces of legislation enacted for the extractives sector over the last 100 years.

TABLE 3.1
Evolution of the legal landscape for the extractives sector in Tanzania



Introduction

As described in Chapter 2, the history of petroleum exploration in Tanzania dates back nearly 70 years. It was not, however, until 1974 that AGIP/AMOCO discovered the first gas deposits at Songo Songo Island, and in 1982 in Mnazi Bay. To enlarge the explorable sedimentary basins, TPDC, which was established in 1969, carried out seismic data shooting in deep-sea waters in 1999. The results of this work led to the first deep-sea licensing round in 2004 (TPDC, 2018). Along with subsequent licensing of IOCs in 2008, exploration operations led to significant offshore gas discoveries in 2010 and 2012. By the end of 2017, Tanzania's natural gas reserves were estimated at 57.54 Tcf. The fundamental challenge for converting these natural resources into financial resources remains with the institutional environment. And the existence of a sound and robust legal and regulatory framework is an important element of the institutional environment for promoting, attracting and retaining private capital inflows and technology transfers to the industry, without undermining the sector's contribution to economic growth and the well-being of Tanzania's citizens. Therefore, this chapter will provide an overview of the legal and regulatory framework in the Tanzanian petroleum sector, and how it has evolved over time.

Evolution of the legislative framework

The legal framework of the petroleum industry in Tanzania has evolved over time. The industry was initially governed by the *Minerals Ordinance of 1920*, which was enacted by the British colonial administration to regulate mineral resources. The 1920 Ordinance was repealed by the *Minerals Ordinance of 1929*, which vested control over, and ownership of, all minerals in the Governor of the Tanganyika Territory. The Governor had discretionary power to grant licences or leases to individual and companies (Pedersen et al., 2016). After the Second World War, many companies joined exploration campaigns for minerals and oil in Tanganyika. In the 1950s, BP and Shell were the first to explore for petroleum resources. To cope with the increase in both mining and exploration activities, the 1929 Ordinance was repealed by the *Mining (Mineral Oil) Ordinance* in 1958 (Tanganyika Territory, 1958). This new ordinance set out the general conditions for licensing mining and petroleum industry prospecting and exploration activities.[1] After independence in 1961, the *Mining (Mineral Oil) Amendment Regulations* of 1962 (GN. No. 478) transferred the powers to grant licences and leases to the Minister responsible for Commerce and Industry.

Nationalization and control

A monumental policy shift occurred in 1967 with the Arusha Declaration, which aimed to build an equal society and accelerate all-inclusive economic development (Nyerere, 1967). The ideology underpinning this post-Arusha Declaration legal framework was subsequently codified in the 1977 Constitution of the United Republic of Tanzania. Article 9 of the Constitution states:

> *The object of this Constitution is to facilitate the building of the United Republic as a nation of equal and free individuals enjoying freedom, justice, fraternity and concord, through the pursuit of the policy of Socialism and Self-Reliance…. And the national wealth shall be used for the development of the people towards eradication of poverty, ignorance and disease; and that economic activities and wealth or the major means of production are not concentrated in the hands of a few individuals.*

Thereafter, the exploration appetite of large international mining and petroleum companies declined, particularly due the Nationalisation Act 2 of 1967, which led to the Government increasing control over and ownership of the extractive sector through state-owned companies. In 1969, the Tanzania Petroleum Development Corporation (TPDC) was established, and in 1972 the State-Owned Mining Corporation (STAMICO) was formed. The Government granted all petroleum exploration licences to TPDC and conferred on it the right to partner with IOCs through production sharing agreements. The first PSA was signed with AGIP in 1969 to explore for oil in the coastal basin, an area previously granted to BP/Shell. TPDC was also given 50% shares in both Tanzania International Petroleum Reserve Ltd (TIPER) and BP in the midstream and downstream operations of the petroleum value chain.[2]

In the spirit of the Constitution, the 1958 Mineral Ordinance was repealed and replaced by two Acts of Parliament: the *Mining Act, 1979* and the *Petroleum (Exploration and Production) Act, 1980*, popularly referred to as PEPA. While placing emphasis on state ownership, the two pieces of legislation recognized the importance of foreign capital and participation of international companies in the sector. The period after 1967 recorded a decline in the mineral sector, and efforts were required to encourage medium- to large-scale mining (Jourdan 1990). The enactment of PEPA marked an official separation of the petroleum industry from the mining industry and a later adoption of the PSA regime as a model of contracting IOCs.

Privatization and economic reforms

In the late 1970s through the 1980s, Tanzania experienced major economic crises, caused by various internal and external factors (Kim, 1986), which forced the Government to embark on socio-economic reforms. A new economic paradigm that emphasized market forces had discredited the idea of state-sponsored industrialization. Despite desperate economic conditions, the Government – led by the reform-minded President Ali Hassan Mwinyi, who had succeeded President Julius Kambarage Nyerere in November 1985 – did not initiate an economic reform programme until mid-1986 (Lofchie, 2014). The reforms involved structural adjustments, liberalization of key markets and privatization, with the private sector expected to play a major role in propelling growth. The state's withdrawal from commercial activities created a fiscal space for investing in other sectors of the economy. The Government's role in the economy became that of establishing a sound investment climate through effective regulation (World Bank, 2005).

In the petroleum sector, PEPA partly aimed to attract private capital by clarifying roles and responsibilities of foreign companies and the host government. It offered a comprehensive legal framework and provided some form of security to investors (Pedersen et al., 2016). The security to investors was further granted through the PSAs. While PEPA endorsed TPDC to enter agreements with IOCs, PSAs permitted the aggrieved party to seek redress at International Courts of Arbitration. In 1989, TPDC developed the first Model Production Sharing Agreement (MPSA) to guide and expedite negotiations of PSAs with IOCs. The MPSAs set down initial terms and conditions of contracting between the Government and IOCs. Since 1989, several updates of MPSAs have taken place, including in 1995, 2004, 2008 and 2013. However, it was the 2004 MPSA that resulted into the third offshore licensing round which led to the significant offshore gas discoveries in 2010 and 2012.

1 The Ordinance defined mineral oil to include petroleum and related hydrocarbon and natural gas existing in its natural condition in strata, asphalt, bitumen and bituminous substances, but did not include coal or bituminous shales or other stratified deposits from which the oil can be extracted by destructive distillation.

2 TIPER has since 1999 been a joint venture between the Government of Tanzania and Oryx Energies. It operates the largest oil terminal in the country, located at Kigamboni, opposite the Port of Dar es Salaam. The plant was commissioned as an oil refinery in the 1960s. It was initially owned jointly by the GoT and Agip (Tanzania) Ltd., and known as the Tanzanian and Italian Petroleum Refining Company Limited. Retrieved from https://en.wikipedia.org/wiki/TIPER

The 1992 *National Energy Policy* was promulgated to pave the way for the private sector to participate in the energy sector, to step-up petroleum exploration activities, and to develop the natural gas resources. In 2000, downstream operations were liberalized. TPDC retained only the upstream operations, and commercial activities in the midstream and downstream segments were designated for the private sector. In 2007, as part of these reforms, TPDC transferred its 50% shareholding in TIPER and BP to the Treasury Registrar pursuant to the *Public Corporation Act 1992*.

Return of state control and strengthened regulations

The discoveries of 2010 and 2012 stimulated not only exploration and investment in midstream activities in the natural gas value chain, but also public expectations and political hype on the advent of the "gas economy". Resource sentiments in the southern regions with natural gas reserves, led some citizens in Mtwara and Lindi to violently protest against the construction of the Mtwara-Dar es Salaam gas pipeline in 2012 and 2013 (Must, 2018; see also Chapter 12). It was therefore deemed necessary to review the regulatory and policy framework to avoid the pitfalls related to the natural resource curse. In 2013, the *Natural Gas Policy* and the *Local Content Policy* were formulated to provide guidance for the development of the industry and to deepen participation of Tanzanian citizens and enterprises. These policies were later merged into the *National Energy Policy* in 2015.

A new *Petroleum Act, 2015* was enacted, repealing PEPA and the *Petroleum Act, 2008* which had focused primarily on the oil sub-sector. The 2015 Act regulates upstream, midstream and downstream operations. While previous legislation is seen to have been enacted in response to investors' concerns, the 2015 legislation was enacted in response to the need for protecting public interests, including participation, ownership, governance and of the management of expectations. Pedersen & Bofin (2015) argue that a complete overhaul of the legal and institutional framework for the petroleum sector in recent years testifies the decision makers' emphasis on promoting Tanzanian business interests.

Some of the key changes introduced by the 2015 *Petroleum Act* include the establishment of the Petroleum Upstream Regulatory Authority (PURA). The legislation bestows the power to grant, renew and revoke licences, and to enter into agreements on the Minister responsible for energy, and ensures transparency in the petroleum industry under the advice of PURA. A further control was added to require Cabinet's endorsement (Sections 5, 48). Under the PEPA, the Commissioner had power to issue decrees and orders, and to decide on disputes that under the 2015 Act have been transferred to PURA. The Act also dispensed power to the Energy and Water Utilities Regulatory Authority (EWURA) to regulate midstream and downstream natural gas and petroleum activities, as well as with powers to issue, renew, suspend and cancel construction approvals and operational licences (Section 29).

The Petroleum Act further designated TPDC as a National Oil Company (NOC) and commercial agency of the Government in the petroleum value chain, with the government's right to maintain at least 51% and 25% of shares in this NOC and a participating interest in petroleum projects (Sections 8, 44). TPDC was granted exclusive rights over upstream operations as a sole licence holder, but assigns such rights to contractors through the PSAs (Sections 44, 55). The Act again allowed TPDC to integrate vertically by assuming roles across the upstream, midstream and downstream segments of the industry value chain.

The *Oil and Gas Revenue Management Act* was also enacted in 2015 to guide the use of revenue from oil and gas resources to avoid any adverse effects of these revenues on fiscal stability, and to ensure that the benefits are spread to future generations. It established the Oil and Gas Fund, the fiscal rules for its use, and a framework for managing oil and gas revenues. Consistent with the Tanzania Extractive Industries Transparency Initiative (TEITI) principles, public disclosures of the PSAs, licences, permits and other key documents were introduced through the passing of the *Tanzania Extractive Industries (Transparency and Accountability) Act, 2015* (see also Annex 4 for a more detailed description of the TEITI).

Additional laws were enacted in 2017. Anchored on section (l) of Article 8 and Article 9(f) of the Constitution, the *Natural Wealth and Resources (Permanent Sovereignty) Act 2017* (Permanent Sovereignty Act) reaffirms the United Republic of Tanzania's permanent sovereignty over all natural wealth and resources, and entrusts the President on behalf of the people the control over those resources. Likewise, the *Natural Wealth and Resources (Review and Re-Negotiation of Unconscionable Terms) Act 2017* (Unconscionable Terms Act) guarantees that the use of natural wealth and resources will benefit Tanzanian citizens, and ensures that all arrangements or agreements by the government protect the interests of the people of Tanzania. This Act also requires, where necessary, all arrangements or agreements on natural wealth and natural resources to be tabled before the National Assembly for review, in order to ensure that any unacceptable terms therein are corrected or deleted.

Impact of legislative changes on the development of the petroleum sector

As highlighted above, major changes in the policy, legal, regulatory and institutional frameworks occurred in the 1980s and again between 2013 and 2017. In both periods, the changes were triggered by discoveries of hydrocarbons and a desire by the Government to secure resource benefits for Tanzanians through ownership, control and participation in the extractives sector (see Part III of this book, especially Chapters 12 and 13). These legislative changes affected the growth of the petroleum industry. For instance, the *Mining (Mineral Oil) Ordinance 1958* propelled the industry's development. For the first time, the Ordinance outlined the implications for petroleum exploration in more detail (Pedersen et al., 2016). The Ordinance also provided the necessary administrative setup, including vesting power to grant licences to the Governor of the Tanganyika Territory. The legislation sparked investors' propensity to invest and marked the beginning of the development of the petroleum industry in Tanzania. In the post-independence period, the power to grant licences was moved from the President to the Minister. The move aimed to reduce excessive bureaucracy in decision-making processes.

The radical socio-economic policy turnaround of 1967 via the Arusha Declaration replaced the market economy with a state-controlled economy. TPDC became the sole licence holder, but was authorized to enter PSAs with IOCs to explore and develop the resources. The transformation however, eroded the confidence of private investors in the political system. The immediate impact was a decline in private capital inflows to various sectors of the economy, including the petroleum industry.

The Government secures resource benefits for Tanzanians through ownership, control and participation in the extractives sector.

The reduction in oil exploration activities since 1967 was also worsened by the lack of requisite technical skills, technology and capital in the country, rendering numerous state-owned enterprises to operate inefficiently and rely heavily on government subventions. Domberger & Piggott (1994) also link the underperformance of many state-owned enterprises to the lack of profit motive and incentives to operate commercially. Being wholly and exclusively owned by the government, the tightening of fiscal space also affected TPDC and the growth of the petroleum industry. To revitalize the industry, the *Petroleum (Exploration and Production) Act, 1980* was enacted to provide security for investors while enabling the state to own and control petroleum resources. The 1980 Act renewed the private sector's confidence in government policy after the 1967 nationalization, which ultimately increased upstream operations that, in part, contributed to the gas discovery at Mnazi Bay in 1982. PEPA also brought about a significant change in the manner of contracting IOCs. Although the Act did not firmly state PSAs as the mechanism for contracting IOCs, from the 1980s the PSA regime was officially adopted.

The 2015 *Petroleum Act* provided for the PSA to be the basis of contracting IOCs in Tanzania. The decision to adopt the PSA regime is consistent with section 27 of the Constitution of URT and the United Nations Resolutions 626 (VII) of 1952 and 1803 (XVII) of 1962, which requires the state and the people to have permanent sovereignty rights over natural resources found in their countries (Shanghvi & Jingu, 2013). In 1992, the first *National Energy Policy* was promulgated focusing on attracting private investors to the energy sector. Although the policy did not have much impact in the petroleum industry, owing to the 1990s price turmoil in the global petroleum market, it helped to set a premise and new momentum for private sector participation in the industry. The need for private sector participation was further emphasized in the national energy policies of 2003 and 2015. In general, as Pedersen et al. (2016) suggest, the role of the state in governing investments in the extractive sector in Tanzania has been gradually strengthened, from the *laissez faire* approach of early colonial times to the very detailed legislation in recent years, including regulation for employment conditions, environment, taxation, local content and corporate social responsibility (CSR) standards.

While the legislative reforms in the 2000s aimed to increase the benefits and control of natural resources to the state and Tanzanian citizens, they are also considered to impose excessive control and regulation, and to create uncertainty and limited security for private investors. For instance, section 113 (4) of the *Petroleum Act 2015* asserts, "the Minister may upon advice of PURA and by order published in the Gazette amend, vary, or alter the second Schedule". The referred schedule establishes the basis for calculating royalties payable to the Government. The potential removal of stabilization clauses from future agreements—as provided for under the *Unconscionable Terms Act 2017*—is likely to make the fiscal regime unpredictable, and, thus, affect future petroleum exploration prospects in the country. Industry experts argue that stable and predictable contractual and fiscal terms are important considerations in ranking investment opportunities in the petroleum industry since the industry involves substantial up-front investments, long project cycles, and great uncertainty with respect to global prices and output (Tordo, 2007). Investors in the petroleum industry make investment decisions based on the long-term perspective of the industry, and they are driven by risks and returns and the belief that the fiscal regime will remain stable and predictable in foreseeable future.

Concluding remarks and policy implications

A sound legal framework is necessary to regulate the petroleum industry and to guide the exploitation of natural resources in ways that promote economic growth, structural transformation and social progress in Tanzania. The framework must establish the lines of authority and accountability between government agencies, and promote transparency in resource management and use. Further, it should promote private sector investments by guaranteeing the security of investments as well as benefits to the host government. The trajectory of legislative changes in Tanzania since independence demonstrates a mix of outcomes, ranging from a restrictive state-controlled regime until the mid-1980s, to a more facilitative regime for private sector investments during the following three decades, and again since 2015 to a more restrictive regime that seeks to maximize local content, state participation and the benefits of natural resources to citizens.

While it is too early to conclude, recent legislative changes have introduced more restrictive provisions and uncertainties for large-scale investments in the petroleum sector. Due to a combination of these legislative changes and the oil and gas price volatility in the international markets, Tanzania has experienced a significant slowdown in upstream activities. In the fourth licensing round of 2013, for example, only five bids were received, but no PSA has been concluded. In addition, of the 26 PSAs that existed in 2013, only 11 were still active by 2017. The relative effect of the two main factors (i.e., restrictive legislation and price fluctuations) cannot be reliably estimated at present. To remain competitive in the natural gas industry and to promote commercialization of existing resources and stimulate further exploration by the IOCs, the fiscal framework should be re-examined by benchmarking Tanzania's regime against peer emerging petro-states.

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4. An overview of the fiscal systems for the petroleum sector in Tanzania

Donald Mmari, James Andilile, Odd-Helge Fjeldstad and Aslak Orre

Recent changes in the legal and fiscal systems related to the petroleum sector in Tanzania have generated considerable debate among stakeholders. While some support the changes, others criticise the moves on the basis that the petroleum industry is still in its infancy. Over the medium to long term, the suitability of the current fiscal regime—created mainly through legislative changes after 2013—will be judged by the extent to which it maximizes the host government's economic rent and provides sufficient incentives to attract further investment in the petroleum industry. This chapter describes the background and the main features of Tanzania's current system for taxation of the petroleum sector.

The legal framework for the petroleum sector in Tanzania

As described in Chapter 3, the overarching principles governing the petroleum industry in Tanzania are found in the 1977 Constitution of the United Republic of Tanzania (URT, 1977) and in two important acts of 2017, namely the *Natural Wealth and Resources (Permanent Sovereignty) Act, 2017* (Permanent Sovereignty Act) (URT, 2017b) and the *Review and Renegotiation of Unconscionable Terms Act, 2017* (Unconscionable Terms Act) (URT, 2017c).

To establish the overarching responsibility for the sector, Article 4 (First Schedule) of the 1977 Constitution states that, among Union matters, that the Government of the URT has power over "mineral oil resources, including crude oil other categories of oil or products and natural gas". Fast forward to 2017, the Permanent Sovereignty Act reaffirms the sovereignty of the citizens of Tanzania over natural resources. The law prohibits the Government from entering into any agreements except if the interests of the people are secured and returns to the Tanzanian economy guaranteed. In the event of disputes, the law calls for all proceedings to be adjudicated by judicial bodies established in Tanzania and not in foreign countries (Section 11). Except for distributed profits, the legislation requires investors to keep their earnings with banks established in Tanzania. To improve oversight, the National Assembly is now empowered to review all agreements entered into within the petroleum sector (Section 12).

The *Unconscionable Terms Act* resonates with Articles 27 and 9 (c) of the Constitution and requires natural resources to be used for the greatest benefit and welfare

of the people of URT. The legislation authorizes the National Assembly to review any agreement and to rectify or expunge any unacceptable terms that are understood to impinge on sovereignty. After the National Assembly resolution, the Government is required within 30 days to notify the other party of its intention to expunge the terms from the agreement if renegotiations are not concluded within 90 days or agreed upon by parties (Section 5).

Other legal instruments regulate taxation in the sector in detail. The *Income Tax Act 2004* (Cap. 332) recognizes the costs incurred on resource prospecting, exploration and development as an asset used in the production of such income (see the Third Schedule). In order to prevent double dipping of recoverable costs, the *Written Laws (Miscellaneous Amendments) Act 2017* (Miscellaneous Amendments Act) (URT, 2017a) altered the basis for calculating taxable income by excluding 'cost oil' or 'cost gas' from gross income and disallowing the depreciation charge on the basis that it has been already recovered through 'cost oil/gas'. The Act further prohibits the deduction of royalties from taxable income, hence enhancing the taxable income base.

PSAs must observe the principles of:

- **Equity and justice**
- **Participation, transparency and accountability**
- **Sustainability, conscionableness and fair dealing**
- **Care for the environment**
- **Favouring the national interest**
- **Compliance and non-derogation from the laws of the URT**

Likewise, the Act directs petroleum royalties to be calculated before 'cost oil/gas' and 'profit oil/gas' allocations. The Act requires Mineral Development Agreements (MDAs) signed prior to the new legislation to remain in force, but there is no such provision for PSAs.

In 2015, the *Oil and Gas Revenue Management Act* (URT, 2015b) established the Oil and Gas Fund and its fiscal rules. According to the Act, the sources of revenues to the Fund are royalties, profit share, dividends, corporate income tax and return on investments of the Fund. The Act delegates powers of collecting taxes and levies in the petroleum industry to the Tanzania Revenue Authority (TRA). The National Oil Company will collect and retain non-tax revenues (surface rentals, signature bonuses and training fees).

In 2015, the new *Petroleum Act* (URT, 2015a) repealed the 1980 *Petroleum Exploration and Production Act* (PEPA). The new Act sanctions the minister to grant, renew and revoke licences, to enter into agreements, and ensure transparency in the petroleum industry. The Act mandates the Cabinet to approve all strategic decisions in the industry, including MPSAs, opening areas for petroleum operations, initiating direct

PSA negotiations with eligible or qualified companies, and granting development licences and extensions. Section 113 of the Act establishes royalties at 12.5% and 7.5% for onshore and offshore, respectively. The Act also authorizes the Minister responsible for petroleum affairs to amend, vary or alter the applicable royalty rates as deemed fit. To minimize erosion of the taxable income base, the Act calls for ring-fencing of recoverable contract costs on each exploration and development licence.

Evolution of the fiscal regime in the petroleum sector

Between the late 1950s and 1980, Tanzania's petroleum industry was administered under the concession regime guided by the *Mining (Mineral Oil) Ordinance* of 1958 (IMF, 2012). In 1980, the *Petroleum Exploration and Production Act* (PEPA) repealed the Ordinance of 1958. Although not explicitly stated in the PEPA, from 1980 the Government formally replaced the concession system with the Production Sharing Agreement (PSA) regime which focused on exploration for oil.

To simplify the administration of the petroleum industry, the comprehensive legislation of 2015 repealed both the PEPA 1980 and the *Petroleum Act 2008*. The new Act refers to PSA as the preferred mechanism for contracting IOCs. The PSAs usually establish rights and obligations of the parties under which exploration and production will take place, thereby regulating the relationships between host governments and investors. Upon the discovery of natural gas, the Government renegotiated the PSAs by signing the *Addendum PSAs*.

How the PSA system works

The PSA negotiations are tripartite in nature involving the government (the resource owner), TPDC (the licence holder) and IOCs (the contractor), and are governed by the *Model Production Sharing Agreement* (MPSA). Since 1980, MPSAs have evolved in five rounds: 1989, 1995, 2004, 2008 and 2013. They are reviewed periodically to adjust to changes in the local and international petroleum industry dynamics. The negotiable terms in the MPSAs include government and contractor take, royalties, cost recovery, state participation, profit share, and other payment obligations (URT, 2013).

IOCs normally bear all the risks and costs on the promise of receiving a share of the production in the event of discoveries, without which the costs incurred are sunk and irrecoverable. The costs incurred are therefore recovered only when production commences (see Chapter 5). In principle, PSAs do not divide profits, but rather the physical production. PSAs work on a reimbursable basis as eligible 'cost oil/gas' is recovered when resources are produced. The 'profit oil/gas' is a residual amount after royalty and cost deductions are apportioned between the IOC and the host country based on the pre-agreed share split. PSAs contain numerous details ranging from financial to technical-related issues. As stipulated in the 2015 *Petroleum Act*, the obligations of the production partners in a PSA, as well as the tax and non-tax revenue accruing to the Government are as follows:

State participation in the PSA is set at a minimum of 25%. The government pays for its share out of its future profit share. State participation increases investment risks as investors are obliged to mobilize the financial resources for its share and for the state. It gives the

right to the government to earn revenue without having paid for initial capital investments.

The PSAs oblige both the licence holder (TPDC) and the contractor (IOCs) to *satisfy the domestic market in Tanzania* from their proportional share of the production. The price of gas could be determined based on the strategic nature of the project and not necessarily the full cost of supply.

The 2015 Act requires the licence holder, the contractor and the subcontractor, including other investors and lenders, to pay ***taxes on their profit shares***. Companies listed at the Dar es Salaam Stock Exchange are subject to ***income tax*** of 25% or 30%, payable only when the venture is profitable. The following fiscal issues affect how profits are calculated:

- The ***transfer pricing*** regulation of 2014 fully addresses and discourages transfer pricing malpractices, as both subsidiaries and related parties of the IOCs are subject to taxation.
- The application of thin capitalization increases the taxable income base and minimizes corporate income tax avoidance by limiting deductible debt interest expenses. For interest to be allowable as an expense, it must have prior approval by PURA.
- ***Capital gains tax*** on disposal of rights gained through PSA and ***additional profit tax*** due to windfall profits resulting from significant price increases in the oil/gas markets
- Dividends and interest expenses are subject to ***final withholding tax*** (WHT), without which the companies with high debt to equity ratio would most likely understate taxable income through deduction of high interest expenses, and consequently be able to repatriate profits at the expense of the host country.
- ***Cost recovery limits*** means that not more than 50% of oil/gas production per year can be used to recover the cost. This guarantees early revenue to the government by increasing (taxable) profits on oil/gas when production commences. Profit on oil/gas is the residual quantum after a deduction of royalties and cost recovery. PURA is mandated to determine prudent costs and a fair rate of return that are eligible for recovery. In the absence of cost recovery limits, contractors could allocate a significant share of production net of royalty payments to cost oil/gas with zero residual taxable profits.
- Recent legislation ensures ***ring-fencing*** of expenditure per contract area, that is, demarcating taxable entities' operations to a contract area or an individual project. This eliminates the possibility of a failed venture being subsidized by a successful venture under the same company. Relaxation of ring-fencing can be detrimental for the government take.
- IOCs must pay ***annual fees*** to the concession holder, TPDC. One such fee is the ***local content fee*** for research, capacity building and technology transfer activities to Tanzanian people and firms. The law also requires IOCs to give preference to the goods and services produced and rendered by Tanzanians, training and employing Tanzanians, and facilitating technology transfers. The ***acreage fee*** is to discourage IOCs from holding large acreages without exploring. IOCs must also pay USD 2.5 million as a (non-deductible) ***signature bonus*** and USD 5 million as a ***production bonus***.
- Payment of ***royalties*** begins immediately upon the start of hydrocarbon production, set at 12.5% and 7.5% for onshore and offshore, respectively, taken off the top of the gross production. The royalty quantum is at the discretion of the Minister responsible for energy, who can amend it at any time.

The major components of the fiscal regime for petroleum are summarized in Box 4.1.

BOX 4.1

The fiscal regime for the petroleum sector in Tanzania as per the Petroleum Act, 2015 and MPSA, 2013

Taxes	Rate
Corporate income	30%
Capital gains	30%
Withholding	10 – 15%, on loan interests and dividends
Additional profit	25 – 35%
Fixed fees	**USD**
Signature bonus	2.5 million (minimum)
Production bonus	5 million (minimum)
Training fees (per year)	0.5 million
Annual rental fees (per km^2)	Initial period USD 50, 1^{st} extension USD 100, 2^{nd} extension USD 200
Royalties	**Percentage**
- offshore	7.5%
- onshore	12.5%
State interests	
Participation interest	25% (minimum)
Production share	As per agreed tranches

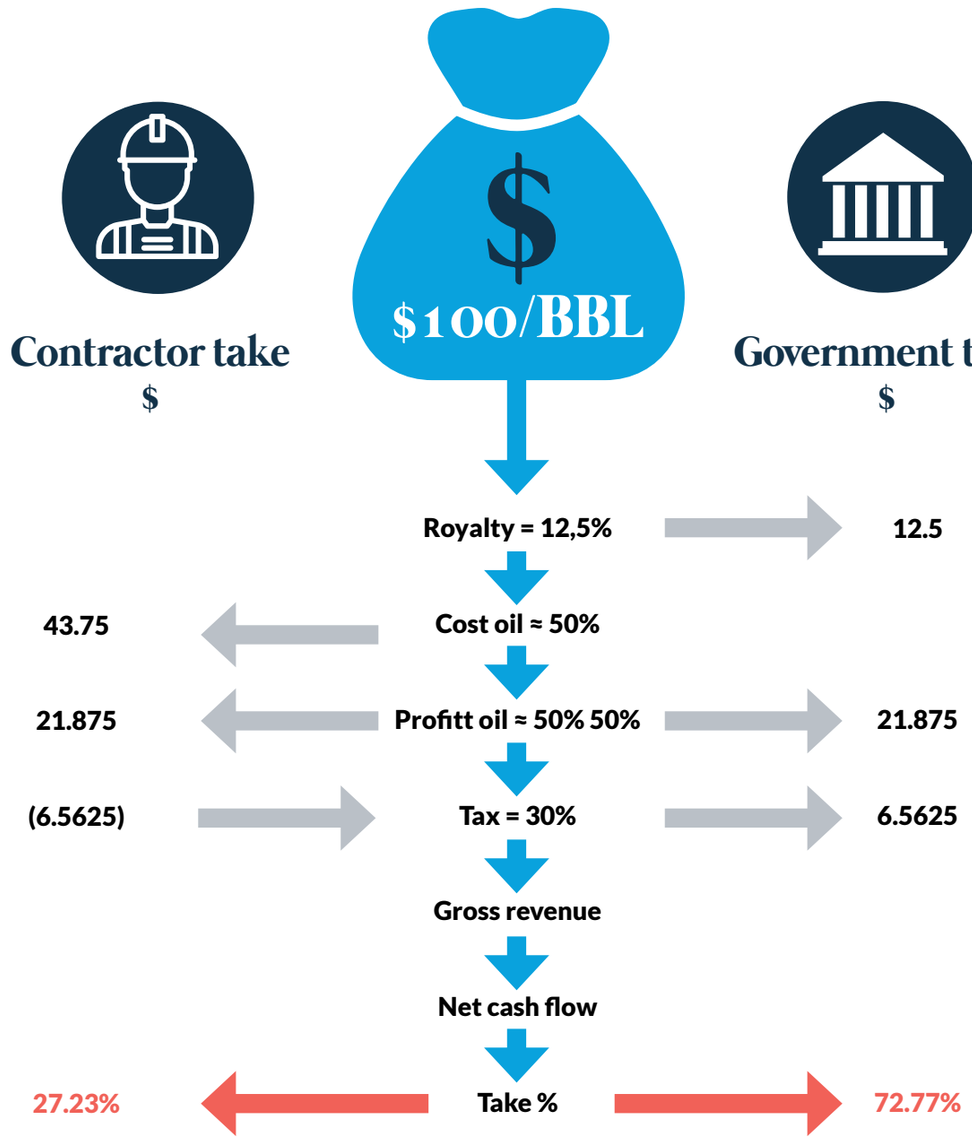
The government 'take' according to MPSA 2013

The 2013 MPSA update was driven by increases in Tanzania's geological prospectivity after major offshore gas discoveries, the presence of multinational oil companies, an increase in demand for gas, and improved gas infrastructure in the country. It resolved some weaknesses of the 2008 MPSA, and generally tended to strengthen the government's hand in the negotiations.

Using a hypothetical value of USD 100 from the sale of a barrel of oil, Figure 4.1 demonstrates a theoretical distribution of revenues between the host government

FIGURE 4.1
Illustration of sharing mechanism under MPSA 2013 between the GoT and IOCs

Source: TPDC (2016)



and IOCs based on the 2013 MPSA. Results of this analysis indicate that, on average, the government take is 72.77% and the IOC take is 27.23%.

Under this model, the Government seems to have an upper hand over IOCs in terms of 'take'. If PSAs are signed under the MPSA 2013, Tanzania will be well compensated relative to its peer countries in sub-Saharan Africa. So far, no PSA has been signed based on the 2013 MPSA. This MPSA was prepared at the time when there was a boom of exploration activities. The industry, however, perceives the terms of the MPSA 2013 to be restrictive and more challenging than previous MPSAs. Therefore, while maximizing the host country's take, it remains unclear whether the new MPSA will catalyse or discourage further investments in the industry.

Concluding remarks and policy implications

Although exploration for oil and gas started in the 1950s, Tanzania is still an emerging petro-state. At present, a number of African countries endowed with natural resources are competing for the capital, technologies and human skills from international companies. For Tanzania to remain competitive, the fiscal regime must adhere to the principles of neutrality, equity, risk sharing, stability and simplicity, while balancing the interests of both the host country and prospective investors. Recent changes in the legislative landscape and the MPSA 2013 are likely to affect the attractiveness of Tanzania as a competitive investment destination for IOCs. The ultimate outcomes will, however, be a function of time.

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5. Is the current fiscal regime suitable for the development of Tanzania's offshore gas reserves?

James Andilile, Odd-Helge Fjeldstad, Donald Mmari and Aslak Orre

Tanzania's offshore discoveries of natural gas represent an opportunity for the country to boost its national income and significantly improve its fiscal balance. However, the development and extraction of the gas requires the injection of substantial capital, which, in turn, will depend upon a robust fiscal regime for the petroleum sector. Following on from the overview of the fiscal systems for the petroleum sector in Chapter 4, this chapter assesses the suitability of the present fiscal system regime for the future development of the sector.

Introduction

The appropriateness of the fiscal regime is judged by the extent to which it achieves the objectives of both the host government and the investor. Put simply, the fiscal regime needs to optimize the government's 'take' (revenue and other benefits) *and* provide sufficient incentives for companies to invest in extraction of the resources (Bindemann, 1999). Resource-rich developing countries often lack the required financial strength, technology and technical know-how to develop hydrocarbon resources and, consequently, depend on international oil companies (IOCs) to do it (Nakhle, 2015). Thus, host countries and IOCs are compelled to negotiate mutually beneficial fiscal terms. This negotiation is embedded in the tax system and the specific terms that affect the revenues and costs of the development.

The fiscal regime is a mechanism through which the host government and IOCs share risks and returns, thereby converting government policies into economic incentives (Tordo, 2007). Hence, the regime is a critical factor in shaping the competitiveness of a country's oil and gas reserves. There is, however, no ideal or model regime for policy makers to adopt. A country's specific circumstances and needs, as well as the government's objectives will determine the final choice of model, but general precepts offer valuable guidelines on key factors to consider in designing the fiscal regime.

The establishment of the national oil company and the adoption of the PSA regime

Between 1950 and 1980, the concession system was the basis for contracting IOCs in Tanzania (see Chapter 2). However, this system offered the Government little control over the country's resources (Johnston & Johnston, 2009). Encouraged by resource nationalism, Tanzania, like many other resource-rich developing countries, established a national oil company, the Tanzania Petroleum Development Corporation (TPDC) with the aim to replace IOCs over time. TPDC entered into the first production sharing agreements (PSAs) with IOCs around 1980. Under the PSA regime, the host government contracts an IOC (or a consortium, including several IOCs and the TPDC), to operate a certain area at its own risks and costs. The resources belong to the host government, but the IOC is entitled to recover the costs incurred out of the resource production. After the cost recovery, the parties share the balance of production based on a pre-agreed split.

While enhancing sovereignty over resources, PSA negotiations are complex and time consuming. In this system, the IOC's revenues encompass the 'cost oil/gas' and 'profit oil/gas.' These revenue flows are contingent on the development and production of the discoveries, but the host government may start earning a token amount of revenue through annual fees immediately after signing the PSA.

Tanzania is currently producing gas from onshore sources in small volumes for the domestic market from Songo Songo Island and Mnazi Bay (see Chapter 2 on the evolution of the petroleum sector in Tanzania). Out of 11 active PSAs, only two gas fields are in the production stage, accounting for a mere 13% of total discoveries. The revenues collected by the Government from the petroleum sector operations between 2004 and 2016 may seem insignificant – TZS 348 billion or around USD 170 million (TPDC, 2018) – but the economy has benefitted significantly because of natural gas usage. With the offshore discoveries, the sector has the potential to contribute significantly to future government revenues; according to some estimates, up to USD 5 billion per year (Daniel et al., 2012). However, the commercialization of the offshore gas is complex and costly. For instance, the long-term gas price would need to be at least USD 21/MMBtu to make Tanzania's planned LNG project commercially viable.

With low global LNG prices due to the production of shale gas, the Tanzanian project may suffer further delays (see Chapter 6). The Government of Tanzania recognizes that a predictable and efficient fiscal framework regulating the PSAs is an important ingredient in accelerating exploration and sustaining investments in the petroleum industry (URT, 2014). But, are the current fiscal framework, the legislative environment and the present model PSA (MPSA) appropriate for the development of Tanzania's offshore gas reserves?

What is an appropriate fiscal system for the petroleum sector?

For IOCs, the fiscal system in place for the petroleum sector is an indicator of a country's competitiveness, and changes to the system can accelerate or decelerate the

growth of the sector. As resource-rich countries compete for capital and technology, system design must consider the overall effect of the fiscal regime: the oil/gas output, the development of marginal fields, the pace of development, early abandonment of the fields, sensitivity to oil/gas price fluctuations and cost variations (Tordo, 2007). In deciding what fiscal regime to choose, the government should consider a model that is most suitable for its conditions, including opportunities and challenges (Nakhle, 2015).

The design of the fiscal system needs to take in all of the physical/geographical, economic and political factors influencing a petroleum field's attractiveness (Kimuli, 2013; Vlasic & Lipovac, 1996). If prospectivity and attractiveness are low, bidding or a high government take will not work (Johnston & Johnston, 2009). Of further note, mature oil-producing countries can secure a fiscal regime with a higher government take than countries with fewer discoveries or those that are still trying to attract investments (Amoako-Tuffour & Owusu-Ayim, 2010).

Daniel et al., (2010) posit that the appropriateness of the fiscal system can be assessed based on the following five criteria:

- **Flexible.** The government gets an adequate share of economic rent, and investors pay taxes proportionally to the underlying conditions of profitability. The system is responsive to changes in market conditions, both better and worse.
- **Progressive**. IOCs pay taxes proportional to the profitability of their operations.
- **Stable.** The fiscal system is stable, and any changes are predictable (Tordo, 2007).
- **Neutral.** Projects are financially viable in the absence of the fiscal instruments. The neutral regime promotes economic efficiency and encourages prudent investments (Amoako-Tuffour et al., 2010).
- **Risk-sharing.** The host government and IOCs share risks and rewards equitably.

Current legislation: Aiming to secure Tanzania's interests

The regulative framework created by the 2013 MPSA and the *Petroleum Act* 2015 aim to secure Tanzania's interests. The 2013 review of the MPSA resulted in several changes in the government's favour (see Chapter 3 on the legislative landscape in the petroleum sector in Tanzania). Both TPDC and the IOCs must now pay taxes from their respective shares. The new framework reduced cost recovery limits from 70% to 50%, introduced a minimum for signature and production bonuses, and reintroduced Additional Profit Taxes (APT). It also removed annual fees from forming part of the recoverable cost. It tripled annual training fees and raised the annual charges for acreage rental by 12.5 times. Taken in sum, the MPSA 2013 provides, in theory, for an average government take of 72.77% (against 27.23% for the IOC), which is above the average in sub-Saharan Africa. With effect from 2015, the MPSAs are prepared by PURA and approved by the Cabinet. Previously, the Minister responsible for energy approved the MPSAs.

The government has held four licensing rounds based on the different MPSAs, with different results in terms of new PSAs (see Table 5.1).

TABLE 5.1
Licensing rounds, blocks auctioned and the resulting PSAs

Licensing round	Year	MPSA regime	Blocks auctioned	Resulting PSAs
1	2001	1995	6	1 PSA for Block 5 was signed with Petrobras
2	2002	1995	11	2 blocks (Blocks 9 and 12) were awarded to Shell
3	2005	2004	7	PSAs signed with Ophir for Block 1, Equinor (Statoil) for Block 2 and Petrobras for Block 6. In 2006, Blocks 3 and 4 were awarded to Ophir.
4	2014	2013	8	No PSA was awarded for the 1 onshore and 7 offshore blocks offered, although five bids were received.

Source: Composed by the authors based on information from TPDC

In the fourth licensing round in 2014, which was based on the 2013 MPSA, five bids were received but no PSA was concluded. The terms of the 2013 MPSA were blamed for the bad outcome, but the global oil and gas industry was already experiencing oversupply and falling prices at that time (see Chapter 2). Hence, the failure to conclude a PSA may have been due in part to changing global demand and supply dynamics not simply the appropriateness of the MPSA 2013. The degree to which the new MPSA is responsive and attractive to investors' interests remains unknown. The next section examines the legislative and fiscal changes in closer detail.

Points of contention in the new fiscal system

The recent legislative changes aim to guarantee Tanzanian interests and sovereignty over its natural resources and the present fiscal terms under the 2013 MPSA will beef-up the hitherto meagre government take in the petroleum industry if it succeeds in attracting private capital. Yet, an unbalanced fiscal regime may make Tanzania an unattractive investment destination for IOCs compared with other emerging gas-rich countries. The 2013 MPSA review only focused on government interests, which may ultimately affect foreign investors' incentives. These concerns warrant a careful review of the global gas supply and market conditions to assess the appropriateness of these terms in the current international context.

There are at least four points of contention in the current legislation. First, some changes in the legal framework may place too strong cards on the Tanzanian side of the

table. For instance, the royalty quantum is at the discretion of the Minister of Energy, who can amend it at any time. This may create uncertainty about the profitability of the project, as when it is set too high, it will increase the payback period. In addition, the National Assembly is empowered to review and demand renegotiation of the PSA agreements *after* they have been signed. Ideally, the National Assembly should have been required to endorse agreements before signing. Inadvertent politicizing of the industry could occur and lead to vicious cycles of negotiations. The review of contractual terms entered amicably in the past may erode investors' confidence in the country's policies and legal framework, and retroactive changes in PSAs may undermine the sanctity of contracts and reduce sector competitiveness. Further, any dispute arising from the PSA agreement that cannot be amicably settled between the parties shall be referred for arbitration to courts in the Tanzanian judiciary system, potentially compromising the neutrality of arbitration.

Second, the cost recovery limit of 50% applied to both onshore and offshore discoveries may not adequately consider the different risks, costs and complexity of extracting gas onshore versus offshore. It also increases the period for IOCs to recover their investments. This is crucial, since cost recovery is a major determinant of both profit sharing and taxes payable to the host country. Information asymmetry makes recoverable costs susceptible to manipulation. As a result, the definition of recoverable costs is often at the centre of any disagreement.

> **Information asymmetry makes recoverable costs susceptible to manipulation.**

Third, while boosting the government's revenues, high bonuses can also affect the country's attractiveness and investment prospects. A careful comparative analysis of other host countries with similar or common operating environments might be necessary to inform the establishment of a fiscal regime that is also attractive for investors.

Finally, the contractor's obligation to satisfy the Tanzanian market with a share of the production may have downsides. One potentially negative effect is the propensity of the government to implement uneconomical projects at huge costs, including government subsidies, on the pretext of strategic significance to the economy. Unless multiplier effects are large enough to offset the opportunity costs, such projects may lead to serious distortions within the petroleum industry and the economy more broadly. In addition, there seems to be no due consideration for the missed opportunity costs of supplying the domestic market instead of exports.

Is the Tanzanian fiscal regime appropriate?

Tanzania's fiscal regime for the petroleum industry, based on the various MPSAs since 1980, has adhered to the principles of a good fiscal regime, i.e. flexibility, progressivity, stability, neutrality and risk-sharing. In the medium to long term, the suitability of the 2013 MPSA will be judged by the extent to which it optimizes the economic rents accrued by Tanzania while offering sufficient incentives to attract more investments in the petroleum sector.

A good MPSA does not always guarantee a good PSA. The final PSA is determined by the quality of the negotiations. Good negotiations are determined by the strength, knowledge, experience and bargaining power of the parties (Nakhle, 2015). In addition, a good PSA also works to the advantage of the host country only when recoverable costs are carefully managed. The IOC has an inherent interest in inflating costs because the more the recoverable costs, the higher the profit (Johnston & Johnston, 2015). The uncertainty emanating from the recent legislative changes, combined with the retroactive changes of the fiscal terms, may, however, undermine investors' confidence in the legal system and reduce incentives for the IOCs to reach a final investment decision for developing Tanzania's offshore gas reserves until more attractive commercial terms are guaranteed.

PSAs signed before 2013 appear to have been more attractive to investors. However, according to Mr. Marc den Hartog, Managing Director of Shell Exploration and Production Tanzania Ltd, the framework in 2018 is also acceptable. He said, *"We believe the terms are good enough to provide the investors with a decent return, provide government with the lion share of the net revenue and still create a project that is globally competitive"* (cited in Simbeye, 2018). Thus, the main challenge may not lie within the legislative framework but in how it is applied in practice as well as other aspects of the business environment.

Concluding remarks and policy implications

Under the new model, the Government seems to secure a reasonable 'take' of revenue, compared with peer countries in sub-Saharan Africa. Since these major fiscal and legislative changes have taken place during the last three years, we recommend an assessment, in comparative terms, of Tanzania's current fiscal and legal framework. Does it boost or constrain the competitiveness of the petroleum sector based on the country's resource endowment and operating environment?

Importantly, any future changes to the fiscal and legal framework should be managed through inclusive and effective communication with industry stakeholders to avoid compromising Tanzania's reputation as a destination for IOC investment. In order to improve the business environment, additional provisions to safeguard the neutrality of arbitration in the event of disagreements between the IOCs, the Government and TPDC should be considered.

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6. Negotiating Tanzania's gas future: What matters for investment and government revenues?

Thomas Scurfield and David Manley

The prospects for Tanzania's offshore gas are uncertain. The Government of Tanzania and a consortium of IOCs are negotiating terms to build a liquefied natural gas (LNG) plant, which will be central to development of the entire offshore gas sector. In this chapter, the impact of these terms on the companies' decisions to invest in the LNG project is examined, and in the next chapter, government revenues from the project are estimated in the event that the project goes ahead.[3] Based on the baseline economic model applied, results indicate that, under current conditions, there is a reasonable chance that IOCs will not proceed with the LNG project. Moreover, given the current status of the country's gas infrastructure and domestic demand conditions, there are chances that investments will shrink further if the government increases taxes and requires companies to share a greater portion of the gas with Tanzania's home market. Hence, the Government faces a difficult choice. It could wait and hope that conditions improve, but this will delay the point at which the country can start earning money from the project. Alternatively, if the Government wants to accelerate development, without harming long-term gains for the country, the following changes to policy are recommended: i) adopt a more progressive tax regime; ii) reconsider the decision for raising the share of gas to be sold to the home market which better balances the economic and commercial perspectives; and iii) create a legal framework that will build confidence and trust among investors and the Tanzanian public.

Introduction

The Government of Tanzania anticipates that the natural gas held in deep-sea deposits about 100 km off the coast will transform the national economy. Developing these gas fields could provide the Government with the financial capital to accelerate industrialization, supply power to the otherwise energy-constrained

3 The analysis in this chapter is an update of the authors' 2017 analysis (Scurfield & Manley, 2017) based on new information and changes in company planning.

country, and ultimately improve people's lives. Foreign companies have proposed an LNG project comprising three offshore blocks, in which Shell and Equinor hold the majority interest.[4] But to start the project and realize the benefits, the companies and the Tanzanian government have much work to do.

The negotiation of regulatory terms for this project centres on the existing production sharing agreements (PSAs) for the offshore blocks and a planned host government agreement (HGA) for the LNG plant. However, two factors complicate the negotiation. First, when the gas was discovered, the price of LNG in Asia – Tanzania's expected export market – was historically high, reaching USD 18 per metric million British thermal units (MMBtu). The price has since dropped, and forecasts suggest it will remain low over the longer term, at around USD 8 per MMBtu (IMF, 2018; World Bank, 2018). Second, new laws passed in 2017 provide for contracts to be frequently renegotiated, and suggest that the Government has the discretion to raise taxes on the gas sector and require more gas to be supplied to the Tanzanian market as domestic demand grows. These two factors could further delay the LNG project and its expected benefits for the country.

However, this does not mean that the Government should rush into a deal that does not benefit Tanzania. Rather, the analysis supports government efforts to negotiate a good deal for the country while ensuring that the planned investment proceeds. To inform these efforts, the study applied an economic model to assess four key regulatory decisions that will be made during negotiations: (1) the project's structure; (2) taxation; (3) pricing of transactions between the upstream and midstream; and (4) allocation of gas between the export and domestic markets. This chapter summarizes results of the analysis.

Baseline assumptions and estimated break-even price for the LNG project

To understand how the four regulatory decisions affect the likelihood of investment and government revenues, the study established a baseline against which changes could be measured. The baseline was informed by discussions with government and company officials, and additional desk research. Notable changes from the authors' 2017 analysis include a different-sized LNG plant, lower capital expenditure and lower LNG shipment costs. The main assumptions are presented in Tables 6.1 and 6.2.

4 Shell holds the exploration and production rights to Blocks 1 and 4, with Ophir Energy and Pavilion Energy holding minority interests. Equinor holds the rights to Block 2, with ExxonMobil holding a minority interest.

TABLE 6.1
Baseline assumptions (values in present value terms, 2018 USD)

Element	Assumption
Minimum return required by companies to trigger investment	13%
Blocks involved	1, 2 and 41
Gas reserves	26.65 trillion cubic feet
LNG plant size	Two trains, each with capacity of seven million metric tons per year
Domestic market obligation	9% (weighted average)
Project structure	Partially segmented: upstream and midstream are separate entities for regulatory and tax purposes
LNG tolling fee	Provides LNG plant a return of 8%
Exploration expenditure	USD 4 billion
Development expenditure	
Upstream (blocks and pipelines)	USD 16 billion
Midstream (LNG plant)	USD 14 billion
Operating expenditure	
Upstream	USD 0.60 / MMBtu
Midstream	USD 0.50 / MMBtu
Domestic pipeline tariff	USD 0.40 / MMBtu
LNG shipment cost	USD 1 / MMBtu
Domestic price	USD 4 / MMBtu

TABLE 6.2
Main components of baseline fiscal regimes for the upstream and midstream[5]

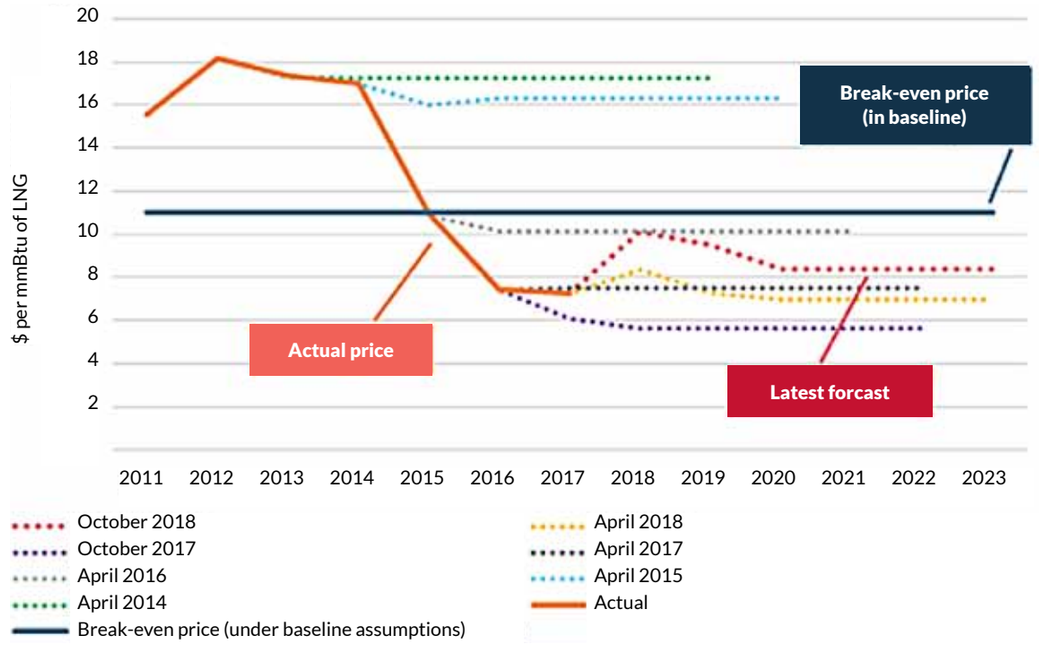
Fiscal term	Upstream (blocks and pipelines)	Midstream (LNG plant)
Royalty	5%	None
Cost gas limit	70%	None
Government share of profit gas	30-50%	None
Royalty paid from government profit gas?	Yes	No
Income tax	30%	30%
Royalty deductible from taxable income?	Yes	No
Depreciation of development capital	20% per year across 5 years	20% per year across 5 years
Loss carry forward	Unlimited	Losses carried forward indefinitely but used against maximum of 70% of income per year
Additional profit tax	None	None
Withholding taxes on dividend and interest	10%	10%
State equity share	10%; carried	10%; carried

Given current price forecasts, there is a reasonable chance that the IOCs will not proceed with the LNG project. The study estimates that investors will need a long-term LNG price of USD 11 per MMBtu to earn the return typically required from LNG projects (Figure 6.1).[6] But IMF and World Bank forecasts for the gas price are USD 8 per MMBtu. However, forecasts are forecasts and not always correct. Companies might also find more efficient ways to develop the gas. Nevertheless, the Tanzanian government will need to be more strategic in its approach to the negotiations to increase the likelihood that investments go ahead.

5 Because the government and companies have not disclosed the PSAs, upstream baseline was established primarily on the leaked addendum to the Block 2 PSA. It is further assumed that the LNG plant is taxed as a normal business entity, but subject to the relevant rules for gas projects in the legislation.

6 In the authors' 2017 analysis, the estimated break-even gas price was USD 14 per MMBtu (Scurfield & Manley, 2017). New information and changes in company planning enabled the reduction of the estimate to USD 11 per MMBtu.

FIGURE 6.1
LNG price forecast and estimated break-even price



Note: Forecasts are based upon prices for Indonesian LNG at point of delivery to Japan, including cost, insurance and freight.

Negotiation of the Host Government Agreement (HGA): Analysis of four key regulatory decisions

Considering the uncertain investment prospects, the study analyzed four of the most important decisions that will be made during negotiation of the offshore LNG project:

(1) The project's structure
(2) Taxation
(3) Share of gas between the export and domestic markets
(4) Pricing of transactions between the upstream and midstream

The project's structure

To begin, the analysis found that the project structure did not have a significant impact on investor returns and government revenues. Furthermore, it is understood that the parties will agree to a partially segmented structure, with the upstream and midstream regulated and taxed as different entities rather than as one entity. Therefore, the impact of project structure is not assessed further. Results for the other three variables – taxation, share of gas, and pricing of transactions are discussed below.

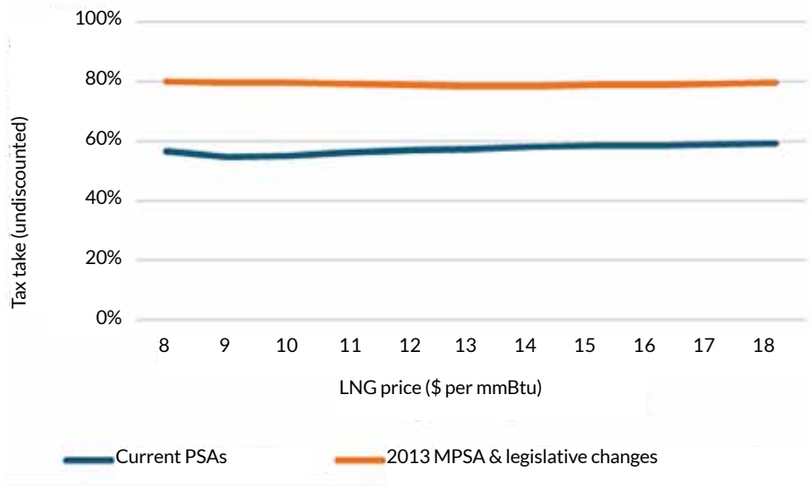
Taxation

The stricter fiscal terms of the 2013 Model Production Sharing Agreement (2013 MPSA) and recent legislation would, if implemented, make investment less likely, but reducing taxes to encourage investment is also risky.

The PSAs already contain upstream fiscal regimes, while the midstream fiscal regime is to be established in the HGA. But for most oil and gas projects, the upstream rather than the midstream generates the largest profit margins, and therefore the LNG plant is likely to be taxed less than the upstream. Accordingly, to significantly increase taxes, the Government would have to renegotiate the PSAs. This may be the Government's intention. As Figure 6.2 illustrates, the 2013 MPSA and recent legislation impose a much higher tax take than what we believe is in the existing PSAs.

FIGURE 6.2

Estimated tax take with the current PSAs and with the 2013 MPSA and recent legislation

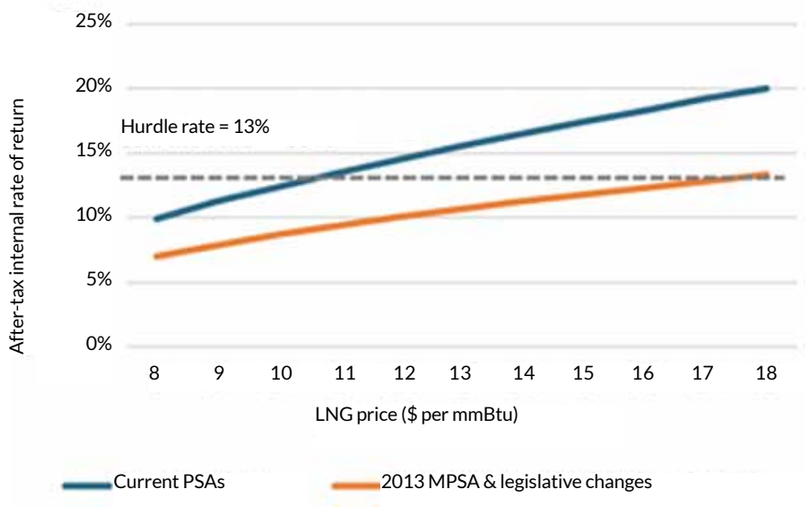


Note: Forecasts are based upon prices for Indonesian LNG at point of delivery to Japan, including cost, insurance and freight.

However, if the Government sought these higher tax terms, the estimated break-even price for the LNG project would rise to a highly unlikely price of USD 17 per MMBtu, unless other cost assumptions and negotiated terms change (see Figure 6.3).

FIGURE 6.3

Estimated after-tax internal rate of return with the current PSAs, and with the 2013 MPSA and recent legislation



Note: Forecasts are based upon prices for Indonesian LNG at point of delivery to Japan, including cost, insurance and freight.

Conversely, moving in the opposite direction and succumbing to companies' pressure to reduce taxes is also fraught with risk, as the history of Tanzania's taxation of the mining sector illustrates. When attracting investors to the country's nascent mining sector in the 1990s, the Government set low taxes only to see gold prices and companies' profits rise without a corresponding rise in government revenues.

Share of gas for the domestic market

While cheap gas for the domestic market could have benefits for Tanzania, the quantity and price of the domestic market obligation (DMO) will impact investors' returns and the government's revenues.

The PSAs establish the share of gas to be supplied to the Tanzanian market rather than exported, but the *Petroleum Act* 2015 sets out a larger share.[7] The Government is expected to purchase a significant amount of this gas and, therefore, it will also have a major influence on the price. Supplying more gas to the domestic market, especially at a lower price than the prices offered at international markets, could significantly benefit Tanzanians in terms of energy supply, industrial utilization, and even domestic use. However, this has consequences. The domestic market is currently small and may be slow to develop. Hence, selling a large amount of gas to the small domestic market might lower prices even more. Low prices would limit the companies' returns as well as limit the government's tax revenues taken from

7 The Petroleum Act requires the offshore blocks to satisfy domestic demand up to the amount of profit gas.

companies' profits. The Government could buy gas from companies at a price closer to the export price (minus liquefaction and shipping costs), while still selling gas cheap to Tanzanians. But this puts the burden on the Government, to be paid by raising more debt or diverting government funds from other uses.

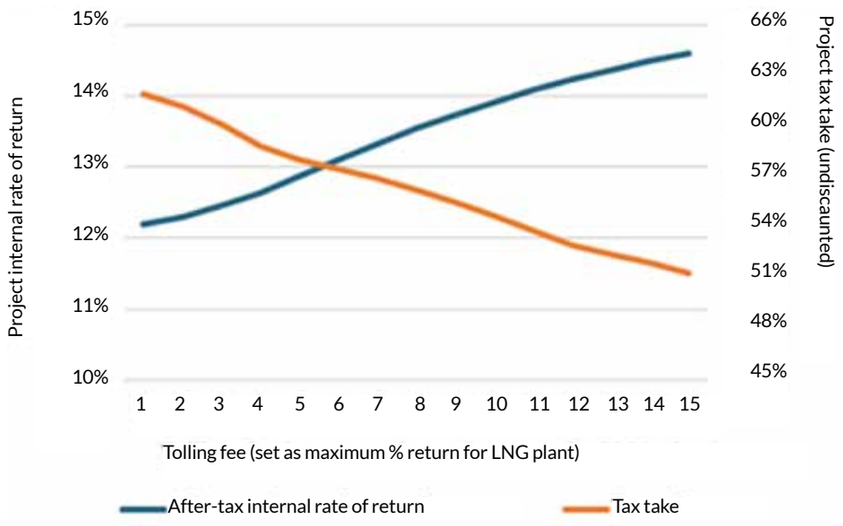
Pricing of transactions between upstream and midstream segments

Regulating the tolling fee may prevent companies from avoiding their taxes, but needs to ensure the LNG plant earns a sufficient return.

Because the companies operating the gas fields will also be the majority owners of the LNG plant, they will have an incentive to set the tolling fee (also known as the liquefaction charge) to reduce their overall tax payments. They might do this by setting a high tolling fee to offset their upstream profits (which are likely to be taxed heavily) and increase their midstream profits (which are likely to be taxed lightly). To prevent this, the Government could set a maximum tolling fee that the companies can charge. However, an excessively low tolling fee could reduce the returns from the LNG project to the extent that it impacts the prospects for investment. Setting a tolling fee that strikes the right balance is difficult. Looking at what other LNG plants charge is a good rule of thumb, but the Government will need to account for the project's specific economics, ownership structure and fiscal regimes (see Figure 6.4).

FIGURE 6.4

Estimated impact of LNG plant returns on project returns and tax take (at LNG price of USD 11 MMBtu)



Concluding remarks and policy implications

Low global gas prices and recent legislative changes create a very challenging context for negotiations for both the Government and IOCs. The operating environment and uncertainty caused by these factors provide the Government with two options. First, it could wait for gas prices to rise, such that stricter terms could be imposed while keeping positive returns for investors. However, this would delay the benefits to Tanzanians, perhaps for a generation. The sooner the Government earns resource rents, the sooner they can be spent on national development. Using a discount rate of 10%, the study estimates that a delay of one year in the start date of the LNG project would reduce government revenues by USD 900 million in present value terms. Second, rather than negotiating stricter terms, the Government could opt to improve investment prospects. However, doing so risks giving the companies too much, at the expense of the government take.

How can the Government strike the right balance? There are three ways:

1. The Government could lower taxes.

However, the Government will want to avoid past mistakes with the mining sector. It could do this by setting taxes that impose a low burden when company profits are low but automatically rise as profits rise, in other words, making the tax regime more progressive. These changes imply that the Government would receive less revenue when profits are low and also involves a tax regime that is more difficult to administer. Despite these factors, a more progressive tax system for the sector would still be beneficial.

2. The Government could lower the domestic market obligation and buy this gas at a price similar to the LNG price.

It could also reduce the impact of more expensive gas being supplied to the Tanzanian market by incentivizing greater exploration for onshore gas. Further onshore discoveries could potentially fill any gap left by the LNG project. Further studies of the costs and benefits of these approaches would be useful.

3. The Government could provide greater certainty to investors via improvements in the business environment and governance.

Some of the provisions in the new laws for the sector—such as the renegotiation of 'unconscionable' contractual terms and banning international arbitration—will need to be implemented carefully. Ensuring stable regulations in the future will also require a transparent approach that Tanzanians' trust. The public disclosure of information on agreements with IOCs and ongoing operations will encourage government officials and companies to negotiate deals that are in Tanzania's long-term interest, and will foster the public's acceptance of the deals that the Government makes. By accurately communicating the context and terms of the agreements, the Government will also help to set realistic public expectations. An important first step, one that is already required by law, would be to disclose the terms of the PSAs currently in place and the host government agreement for the LNG project once it is concluded.

At this juncture, the prospects for the Tanzanian gas sector hang in the balance. By taking careful and transparent decisions and making improvements in the wider business climate, the Government can give the country its best chance of realizing the benefits offered by its offshore reserves.

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7. Uncertain potential: Managing Tanzania's gas revenues

Thomas Scurfield and David Mihalyi

Lower global gas prices coupled with ongoing uncertainty about investment in its liquefied natural gas (LNG) project have impacted the outlook for Tanzania's offshore gas. In this chapter, the revenue potential of the sector and the implications for public finances are examined.[8] The results indicate that, even if the LNG project proceeds, the revenues it will generate are unlikely to be economically transformative. Modest revenues mean the impact of the Oil and Gas Revenues Management Act's fiscal rules will be limited, but this is not necessarily problematic. The key current priority should be to ensure that Tanzania avoids the 'pre-source curse' in which overly optimistic expectations of future gas revenues derail public finances.

Introduction

The discovery of large natural gas deposits off the Tanzanian coast since 2010, and subsequent plans for the LNG project, have led to expectations that the sector could transform the national economy and drive human development. In 2014, the International Monetary Fund (IMF) suggested that the project could generate government revenue of up to USD 6 billion per year (IMF, 2014). These expectations led to the Government passing the Oil and Gas Revenues Management Act in 2015.[9] The Act sets out a comprehensive revenue management framework, including the establishment of an oil and gas fund (see Chapter 9) and fiscal rules related to both gas revenues and overall public finances.

The natural gas market has, however, changed considerably since the revenue management framework was developed. The LNG price in Asian markets – Tanzania's likeliest export destination – has fallen significantly and is expected to remain low for the foreseeable future. This will not only affect the timing and magnitude of government revenues, but may also affect the level of investment in the sector. As discussed in Chapter 6, a decision on whether to go ahead with the LNG project is still uncertain. Negotiation of its regulatory framework is ongoing, and a final investment decision is unlikely before 2022.

8 The analysis in this chapter is an update the results of the authors' 2017 analysis (Scurfield & Mihalyi, 2017) based on new information and changes in company planning.
9 For brevity, this will henceforth be referred to as the Revenues Management Act.

Tanzania's gas sector is, therefore, at a crucial juncture. Given the expectations of a large gas revenue windfall, it is also an important time for the country's public finances. Several other countries have seen their economies deteriorate only a few years after major resource discoveries because misguided revenue expectations led to bad policy decisions. See Chapter 1 for a more detailed discussion of the resource curse. Applying a baseline economic model, the sector's revenue potential and its implications for the legislated revenue management framework and wider public finances are examined. This chapter summarizes the results of the analysis.

Baseline assumptions

The same set of baseline assumptions with respect to the LNG project (see Chapter 6, especially Tables 6.1 and 6.2) are used in this part of the analysis. In addition, a set of baseline assumptions for the Tanzanian economy and public finances were applied (see Table 7.1). Potential government revenues from the sector were estimated across a range of price scenarios, before analyzing their potential impact on public finances based on the current set of fiscal rules.

TABLE 7.1
Baseline assumptions about the economy and public finances (in 2018 USD)

Element	Assumption
GDP in 2017/18	USD 53.7 billion
Annual non-gas GDP growth	5.5%
Government own revenue in 2017/18	USD 8.0 billion
Annual non-gas revenue growth	5.5%
Grants received in 2017/18	USD 0.43 billion
Annual reduction in grants as GDP per capita rises	5%
End of grants	Upper middle income status
Government primary expenditure in 2017/18	USD 9.9 billion
Annual primary expenditure growth	5.5%
Government debt in 2017/18	USD 20.9 billion
Government real interest rate for debt ≤ 40% of GDP	1.5%
Government real interest rate for debt ≥ 40% of GDP	4.5%

Key findings

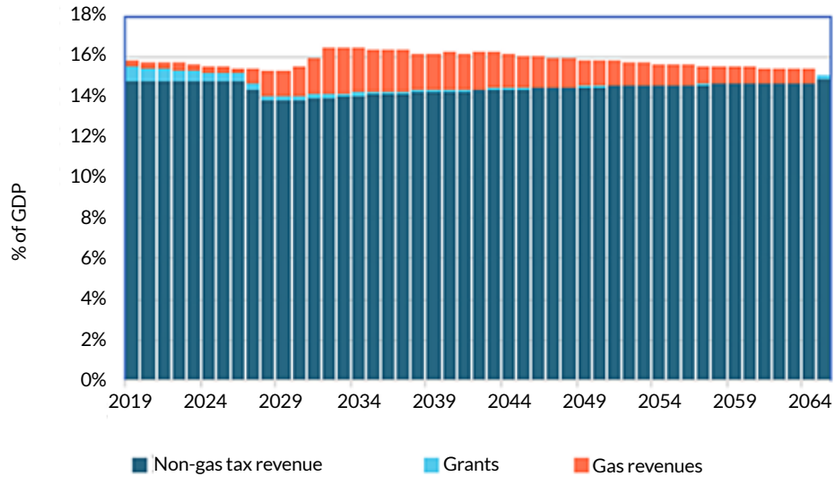
1. Investment in the LNG project is still very uncertain, but assuming it goes ahead the government revenues it will generate are unlikely to be economically transformative.

The analysis estimated that investors will need a long-term LNG price of around USD 11 per MMBtu to earn the return they typically require from LNG projects. Given that USD 11 per MMBtu was the average real price over the past 15 years, investment prospects now appear brighter. However, with long-term price forecasts of USD 8 per MMBtu (World Bank, 2018), there is still a reasonable chance that companies will decide not to invest, unless more efficient options for development and production can improve the prospects for positive returns.

If the LNG project does go ahead – at the price of USD 11 per MMBtu – government revenue would average approximately USD 2.9 billion a year (in real terms) over the period of gas production.[10] This amount is larger than previously estimated given changes in the baseline assumptions used for the project, but not large enough to change the public finance implications. It is equivalent to only approximately USD 49 or TZS 110,000 per person a year for the current population, and even less (USD 24 or TZS 53,000 per person a year) once population growth over the period is considered.[11]

Annual revenue of USD 2.9 billion from the LNG project would represent a significant contribution to the Tanzanian economy today. However, GDP and non-gas revenue are likely to have increased significantly by 2027 (assuming that both grow at 5.5% per annum). Therefore, revenues from the project are likely to account for a relatively small share of the economy: approximately 7.7% of total revenue and 1.2% of GDP a year on average, and 13.1% of total revenue and 2.2% of GDP at their peak. Indeed, the further into the future the project is delayed, the smaller these revenues will be relative to total revenues and GDP (see Figure 7.1).

FIGURE 7.1
Estimated gas revenues with LNG price of USD 11/MMBtu



10 These gas revenue amounts include all major revenue streams applicable to the LNG project, with the exception of taxes on inputs (e.g., import duty and VAT) and capital gains. The model assumes that tax laws are perfectly enforced and companies do not attempt to minimize their tax bills.

11 Revenue in Tanzanian shillings is based on an exchange rate as set out in the IMF country report for 2018 (IMF, 2018). Population projections are taken from the United Nations (2017).

The analysis found that gas revenues are likely to be relatively modest across most scenarios examined. Only if LNG prices are significantly higher than expected, i.e. at least USD 15-16 per MMBtu, could potential government revenues be considered substantial.

TABLE 7.2
Estimated government revenues from the LNG project across different price scenarios (USD/MMBtu)

	Current outlook USD 8/MMBtu	Historical average price USD 11/MMBtu	High price USD 16/ MMBtu
Total annual revenue	USD 1.6 billion	USD 2.9 billion	USD 5.0 billion
Annual revenue per person	USD 13	USD 24	USD 42
Annual revenue as % of total government revenue	4.2%	7.7%	13.2%
Annual revenue as % of GDP	0.6%	1.2%	2.2%

Large discoveries could change the sector's revenue potential, but the delays in the investment decision for the LNG project is likely to impact investors' interest in further exploration. Therefore, the possibility of other projects is not considered in revenue projections.

2. Modest gas revenues will mean the Revenue Management Act's fiscal rules have limited impact on the use of these revenues, but the rules have other shortcomings.

Revenues are not expected to reach the 3% of GDP threshold at which they are required to be deposited into the Oil and Gas Fund's Revenue Saving Account. Therefore, they will only finance the government budget. Savings are only likely if the gas price reaches at least USD 15-16 per MMBtu. Even then, savings would still be relatively small, and lower quickly once revenues fell from their peak (see Figure 7.2). However, unless circumstances change significantly, we do not believe this necessitates lowering the savings threshold. A common policy-making mistake is to save a significant proportion of resource revenues while borrowing simultaneously. A growing number of countries are setting up sovereign wealth funds into which they place revenues that earn low interest, despite also having large debts at much higher interest rates (Bauer and Mihalyi, 2018).

FIGURE 7.2
Projected funds in the Oil and Gas Fund Revenue Saving Account across different LNG price scenarios

While the limited impact of the fiscal rules does not necessarily mean they are inappropriate, they do suffer from several shortcomings. A key weakness is their pro-cyclicality, which means spending can increase when the economy is strong and must be cut when the economy is weak. This effect, which will exacerbate boom-bust cycles, is a result of them being anchored to GDP. The financing mechanism for the Tanzania Petroleum Development Corporation (TPDC) is also linked to GDP, which means it is unlikely to be sufficiently responsive to the company's needs or spending capacity. Finally, rules that earmark gas revenues for development expenditure are not situated within a broader spending strategy (for example, one that specifies the composition of the larger budget). In some countries, resource revenues directed toward development expenditure have simply resulted in the withdrawal of non-resource revenues from these areas. Therefore, irrespective of the size of Tanzania's gas revenues, the current rules provide no guarantee that development expenditure in strategic areas will actually increase.

3. Tanzania appears to be sensibly avoiding making public finance decisions based on hopes of a gas revenue windfall, but is still at risk.

One of the most important policy implications of uncertain – and likely modest – gas revenues is that the government should not base its public finance plans on the expectation of a future gas windfall. Doing so would put Tanzania at risk of a common mistake that has plagued many countries after they have made large discoveries, with expectations of future revenues leading to economic problems. This phenomenon is commonly referred to as the 'pre-source curse' (Cust and Mihalyi, 2017; and Chapter 1 in this book).

Thus far, Tanzania appears to be avoiding the 'pre-source curse'. The country's public finances appear to be in reasonable health, and Tanzania seems to be on the path towards meeting the East Africa Monetary Union (EAMU) requirement that the overall fiscal deficit does not exceed 3% of GDP by fiscal year 2020/21. It also appears to be currently maintaining reasonable debt levels. If the LNG project goes ahead, a modest increase in spending in the longer term (once gas revenues start flowing) may be possible. However, if primary expenditure was to grow faster than non-gas GDP for a sustained period, the deficit could be expected to increase rapidly, which even the arrival of large gas revenues might not be able to mitigate.

Concluding remarks and policy implications

The analysis of the revenue potential of Tanzania's gas sector indicates significant uncertainty regarding the level of investment in the gas sector and how much revenue it will generate. Even if the LNG project proceeds, revenues are likely to be modest. This outlook contrasts with the IMF's early projections, but is aligned with more recent assessments (see, for example, Henstridge, 2018).

Modest gas revenues mean the Revenue Management Act's fiscal rules are likely to have limited impact. Based on the current outlook, this is not a cause for concern in itself. However, the framework does have weaknesses, including its pro-cyclicality and insufficient measures to boost development expenditure. Therefore, though it is too early to determine an optimal revenue management framework given that current conditions might have changed significantly by the time large revenues start flowing, the Government should consider a comprehensive review of the framework in the coming years. It should also consider reviewing some rules now. The rule limiting recurrent expenditure growth is already effective. While imposing a limit on recurrent expenditure growth is sensible, its link to annual GDP risks exacerbating boom-bust cycles even before the LNG project commences. Similarly, the financing mechanism for TPDC has immediate implications given that the company will need to begin building its capacity to play an active role in future commercial petroleum activities.

Uncertain– and likely modest – gas revenues put Tanzania at risk of the 'pre-source curse', whereby expectations of future revenues lead to economic problems. Currently, the Government does not appear to be making this mistake. However, it could take steps to further protect itself. It should adhere to the fiscal rules of the East Africa Monetary Union, with any additional spending allowed within the deficit limit directed towards the development budget. The Government should also consider building on disclosure rules in the Revenues Management Act to increase transparency and accountability efforts in budget management. This could include tasking an independent body with overseeing improved disclosure of budgetary information (particularly on borrowing) and assessing compliance with both regional and national fiscal rules. Finally, it will be critical for the Government to manage public expectations about the likely impact of gas revenues. This would reduce the likelihood of unrealistic expectations derailing government policies.

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8. Non-resource taxation in a resource-rich setting

Odd-Helge Fjeldstad, Cornel Jahari, Donald Mmari and Ingrid Hoem Sjursen

Tanzania might become a large producer of gas and a potential exporter of liquefied natural gas (LNG) over coming decades. With this comes expectations of significant petro-revenues and prospects of natural gas-driven structural transformation, bringing with it improved economic and social conditions for the people of Tanzania. However, experiences from other countries suggest that it is challenging to turn natural resource wealth into improved welfare for the majority of citizens. This chapter examines the challenges related to the management of government revenues, particularly taxes. To do this, a research survey involving around 3,000 respondents was conducted of taxpayer attitudes in Dar es Salaam and in the two southern regions of Mtwara and Lindi, where gas is currently being produced. Results from the analysis indicate that continued efforts to expand the non-resource tax base are essential for successful management of Tanzania's resource wealth.

Challenges related to gas discoveries and the non-resource tax base

Revenues from natural gas exports represent an opportunity for the Government to improve the welfare of Tanzanians. At the same time, experiences from other resource-abundant countries, show that the management of natural resources can be very challenging (Mehlum et al., 2006; Ross, 2015; Venables, 2016). Resource-rich countries tend to have lower levels of economic and social development than comparable countries with smaller resource endowments (Collier & Hoeffler, 1998; Leite & Weidmann, 2002; Robinson et al., 2006; Ramsay, 2011; Brollo et al., 2013; Sala-i-Martin & Subramanian, 2013). This phenomenon is often referred to as the 'resource curse', a term first proposed by Auty (1993). See Chapter 1 for a more detailed discussion of the resource curse.

When faced with large gas revenues, the Government might be tempted to ignore the development of the non-resource tax base. The current study shows that continued efforts to increase tax compliance and expand the non-resource revenue base (including the number of citizens and firms paying tax) are essential for successful revenue management in general.

Taxation can be an important mechanism for citizens to hold their governments accountable for public service provision (Moore et al., 2018). There is a strong argument in the literature that a substantial 'governance dividend' can be gained from mobilizing domestic financial resources through the tax system (Levi, 1988; Tilly, 1992; Braütigam et al., 2008). Bargaining over taxes is central to building relations of accountability between the state and citizens based on mutual rights and obligations, rather than on patronage and coercion (Prichard, 2015). Taxpayers' mobilization around common interests has potentially positive outcomes for governance. This idea of bargaining and negotiation over taxes is central to the concept of a social fiscal contract. This is essentially about stimulating good governance at the interface between state and society, in response to the demands of citizens. A virtuous cycle may be generated whereby the generation of tax revenues leads to improved service provision, which, in turn, increases citizens' willingness to pay their taxes. Thus, non-resource taxes are not only a source of government revenue, but are also likely to have positive effects on transparency, control of corruption and the provision of public goods.

Another argument for maintaining non-resource taxation in the presence of large future gas revenues is that natural gas is a non-renewable resource that will eventually be depleted (IMF, 2012). A well-functioning tax system will be crucial to generate government revenues after resource depletion. Furthermore, petroleum prices tend to fluctuate heavily. Other sources of revenues, such as tax payments, can provide an important buffer to help mitigate or reduce the effect of this volatility on the economy.

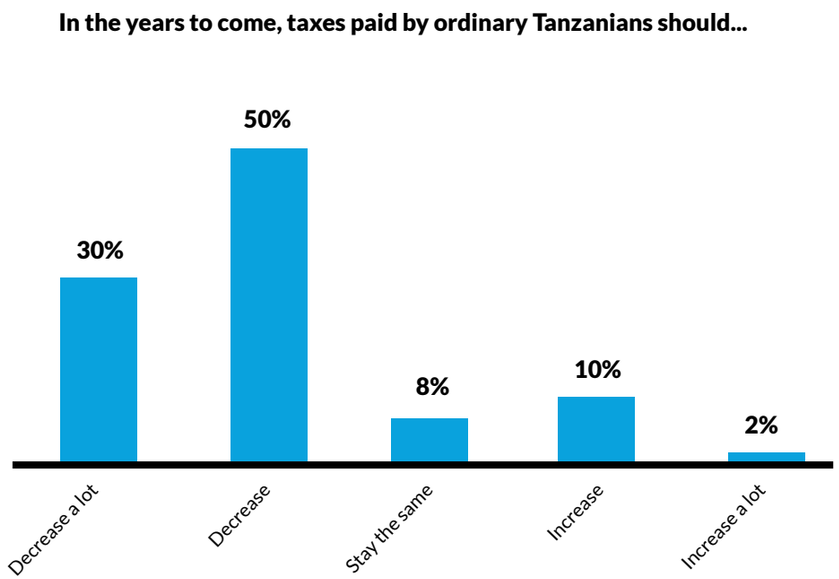
Though significant progress has been made during the last two decades, Tanzania still struggles to broaden the tax base. Tax non-compliance is widespread. In November 2010, for instance, only 400 large taxpayers were registered (0.08% of total taxpayers). These large taxpayers contributed about 70% of total domestic revenue collections in Tanzania (Fjeldstad, 2014).

In addition, a large share of the economic activity in Tanzania is located within the informal sector (TRA, 2011; Medina et al., 2017). Some studies estimate the size of the informal sector to be more than 50% of non-agricultural GDP. According to the National Bureau of Statistics' *Integrated Labour Force Survey 2014*, more than a half of urban households in Tanzania are engaged in informal business (64.6% of households in Dar es Salaam and 56.9% in other urban areas) (NBS 2015). The widespread and generous tax exemption regime further adds to narrowing the revenue base (Fjeldstad, 2014). How can tax non-compliance be reduced and the tax base broadened? This is a question that tax authorities worldwide, particularly in developing countries, are constantly trying to answer.

Taxpayer attitudes in Tanzania

In July and August 2015, a research team from CMI, REPOA and the Norwegian School of Economics conducted a survey of 3,000 respondents in Dar es Salaam and in the two southern regions of Mtwara and Lindi where natural gas is currently being produced (see Chapter 2). The survey confirmed that citizens in Tanzania have low willingness to pay tax. As many as 80% of the respondents answered that they preferred taxes paid by ordinary citizens to 'decrease' or 'decrease a lot'. The distribution of the respondents' answers is illustrated in Figure 8.1.

FIGURE 8.1
Taxpayers' attitudes to level of tax burden



The reasons as to why Tanzanians are unwilling to pay tax and what can be done about it are probably complex and affected by different factors. However, further inquiry through focus group discussions suggested that the following factors are part of the explanation.

1. Taxes are perceived to be too high

Many of the participants explained that even though they agree that it is wrong not to pay tax, they think taxes are too high, as reflected in the following statements:

> "People do not pay taxes because rates are too high."

> "Tax rates are unnecessarily high which discourage taxpayers."

> "We are failing to pay tax because we do not have reliable income."

These statements are in line with results from the Afrobarometer survey for Tanzania from 2011-2012 (see Ali et al., 2014). In that survey, 50% of the respondents answered that the main reason for why people evade taxes is that "taxes are too high" or "taxes are unaffordable". Thus, tax rates are perceived to be too high both in terms of what the respondents can afford and in terms of what they perceive to be reasonable.

2. Poor public services

Many of the focus group participants also argued that the quality and quantity of public services provided are not sufficient to justify current tax rates. As one participant said:

> "In Tanzania, taxpayers do not benefit from public services. Look at drainage systems in our streets, they are all in a bad shape even though people pay taxes. This discourages taxpayers."

The importance of public services in explaining taxpayer behaviour is also reflected in findings from the Afrobarometer survey. Sixteen percent of the respondents reported "poor public services" as the main reason for why people evade taxes. Related to this, Ali et al. (2014) found a positive correlation between satisfaction with the provision of certain public services and taxcompliant attitudes.

3. Lack of tax knowledge

Many participants also argued that they simply do not know how tax revenue is used and that this makes them unwilling to pay tax. This is reflected in the following responses from some of the participants:

> "Unfortunately, people who do not know the importance of paying tax do not pay tax."

> "(…) what is important now is for the Government to give tax education to citizens on how they can benefit from tax because currently we do not see any advantage of paying tax."

> "(…) education should be given to the public as to why they should pay tax and how will they benefit from it."

Concluding remarks and policy implications

Continued efforts to increase tax compliance and expand the tax base (the number of citizens and companies paying tax) are likely to be an important part of a successful fiscal policy in Tanzania. A well-functioning non-resource tax system will also be important to induce citizens to hold the government more accountable for public expenditure, including the use of resource revenues. This, in turn, is likely to improve the provision of public services and, thereby, increase citizens' willingness to pay tax.

The results from the survey of taxpayers show that low willingness to pay tax is a significant challenge. High tax rates, poor public services and lack of awareness on taxation and public spending are important factors in explaining the low willingness to pay. Based on the findings, the following recommendations are offered for the consideration by policy makers in their efforts to enhance tax compliance in Tanzania:

1. **Provide taxpayers with more information about the purpose and use of tax payments;**

2. **Improve public services more generally, and also be more sensitive to citizens' preferences and needs; and**

3. **Make tax administration responsive to taxpayer's operating environment, by making tax payments more affordable and simplified.**

Addressing the informal sector and cutting down on tax exemptions are complex and challenging, but they are potentially rewarding areas to focus efforts on broadening the revenue base and building taxpayer culture. In this perspective, the challenge for Tanzania is not only to tax more (i.e., to increase the tax to-GDP ratio), but also to tax a larger number of citizens and enterprises more consensually, transparently, predictably and honestly.

Experiences show that taxpayers' behaviour can be transformed by reforming the tax and expenditure system, leading to both a greater willingness to pay and an increased propensity to mobilize demand for better public services (Moore et al., 2018). During this process it is important to strike the right balance between the expansion of the tax base, compliance and enforcement.

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9. Should Tanzania establish a petroleum fund?

Ragnar Torvik

The Government of Tanzania is looking for the best policies and institutional designs to turn future petroleum revenues into welfare, development and jobs. One option is to establish a petroleum fund with the aim of translating petroleum revenues into long-term financial wealth. This chapter examines the benefits and costs, as well as alternatives to establishing a petroleum fund. Based on the evidence, the analysis concludes that the Tanzanian society will benefit more by investing in infrastructure, health and education, rather than establishing a sovereign wealth fund and investing in foreign assets.

The challenge

On average, countries with abundant reserves of petroleum are claimed to have lower economic growth, less democracy, more social unrest, and an erosion of their institutional quality (Gelb, 1988; Karl, 1997; Collier & Hoeffler, 1998; Ross, 2001, 2015; Mehlum et al., 2006; van der Ploeg, 2011). Such outcomes have sparked an interest in policy solutions to deal with these possible adverse effects of resource abundance. A main challenge with the literature on the resource curse, however, is that it mainly describes the economic and political outcomes resulting from resource abundance, but is rather short on offering policy advice. Politicians and bureaucrats in petroleum-producing countries, in contrast, have put major efforts into policy solutions and institutional designs to cope with possible unfavourable consequences of petroleum income. One dominant institutional design, which more and more petroleum producers seem to adopt, is to establish a petroleum fund.

The first petroleum fund established was the Kuwait Investment Authority in 1953. Later petroleum funds include the Alberta Heritage Savings Trust Fund in Canada, established in 1976, the Alaska Permanent Fund established the same year, and the Norwegian Government Pension Fund Global established in 1990 (Torvik, 2018). In recent years, petroleum funds have spread to many petroleum producers, including several African countries. For example, Chad, Angola and Nigeria have established sovereign wealth funds to manage their petroleum revenues.

Designing a petroleum fund

The design of a petroleum fund depends on answers to the following three questions. First, how much of the petroleum income shall be channelled into the fund? Second, how shall the fund be managed? Third, how shall payments out of the fund be decided? Various sovereign wealth funds have provided different answers to these three questions.

It is also important to distinguish between two different purposes of petroleum funds. Savings funds, on the one hand, are sovereign wealth funds with the aim of translating petroleum wealth into long-term financial wealth. They are a vehicle for long-term management of petroleum revenues. Stabilization funds, on the other hand, are funds that aim to prevent short-term fluctuations in revenues turning into short-term fluctuations in government spending. This can be done, for instance as in the copper fund in Chile, by spending less than the total revenues when the prices are high, and more when prices are low. The present analysis focuses on savings funds, but it is important to acknowledge that saving funds also have short-term stabilizing properties on the economy.

The pros and cons of establishing a petroleum fund

Before deciding to establish a petroleum fund or not, the Government needs to weigh up the potential benefits of the fund against the potential costs.

The benefits

Turning first to the benefits, a petroleum fund fosters policy that is more rules-based, and less captive to day-to-day political demands. This has the potential effect of promoting a long-term, more stable policy approach. Such a long-term view on a country's petroleum assets is important for several reasons. First, what is often termed petroleum income is not really income in the conventional sense, but selling off one type of assets (non-renewable natural resource assets) and replacing them with another (dollars). The establishment of a petroleum fund is a way to manage this transition from resource wealth to financial wealth. Second, consuming too much of the petroleum proceeds in the short run induces a structural shift away from traded towards (public and private) non-traded sectors that is not sustainable. It has, at some point, to be reversed. Third, a petroleum fund may contribute to investment decisions being based on long-term economic criteria, and not day-to-day political decisions. Fourth, a petroleum fund ensures the decoupling of resource spending and resource income. Petroleum prices and production levels are volatile. A petroleum fund can transform such volatile income streams into more stable government spending. This has a stabilization effect on the economy, ensuring that the cycles in the resource sector are not magnified by pro-cyclical use of resource income (van der Ploeg & Venables, 2012). It also allows for more stable provision of public services. In conclusion, there are many attractive attributes of establishing a petroleum fund.

The costs

Turning to costs, the potential drawbacks of establishing a petroleum fund can be illustrated by the less than favourable experiences from other African countries that have introduced such funds. One example is Chad, which, assisted by the World Bank, established a "future generations fund" where petroleum revenues were to be set aside. The fund was set up as part of an agreement with the World Bank that involved financing of the pipeline from land-locked Chad to the port in Cameroon. However, when political tensions erupted, the fund was raided by the president and spent on the military. As a response, the World Bank suspended relations with the

regime. Another example is Angola, which established a petroleum fund in 2008. In 2013, the son of then President José Eduardo dos Santos became the head of its board of directors. This raises serious questions about the fund's independence from the political elite and whether the fund in reality is setting up a new way to manage the resource wealth.

These examples highlight general lessons. In particular, a major drawback with establishing a petroleum fund within a weak institutional setting is that financial assets are highly appropriable. This generates incentives for rent-seeking by political and private entrepreneurs with the aim of securing these funds for their own political or private purpose. Such rent-seeking is costly in itself, in that entrepreneurial talent is wasted in trying to appropriate income already created, rather than creating additional income. Such rent-seeking also brings with it negative externalities for the rest of society. First, when more entrepreneurial talent is allocated to rent-seeking and less to productive activities, the income of each remaining producer falls. When entrepreneurs shift from production to rent-seeking, this is equivalent to a shift from activities with positive externalities for the rest of the economy (production that generates income and thus demand which benefits other producers), to activities with negative externalities (rent-seeking that generates costs for other producers). Consequently, the aggregate fall in production can be large.

Second, the presence of a 'lootable' petroleum fund produces perverse incentives when it comes to investing in institutional capacity. Weak institutions are a prerequisite for politicians being able to loot a fund (Acemoglu & Robinson, 2012).

Thus, a petroleum fund may bring with it political incentives to weaken, rather than to strengthen, institutions.

Third, the combined effect of the first two challenges makes it less attractive for private investors to invest. The future capital stock of the economy, and thus income, is lower than it otherwise would be.

In sum, establishing a petroleum fund in a weakly institutionalized setting brings with it considerable potential costs for the society.

The alternatives

Developing countries typically have limited and poor quality infrastructure and low levels of human development. Starting at these low levels, the potential returns on investments in infrastructure, health and education are much higher than for developed countries. In contrast, the direct return from foreign financial assets in a petroleum fund is independent of the level of development of a country. In isolation, this means that, from the point of view of a developing country, a petroleum fund should be less attractive as compared with a developed country.

Further arguments pull in the same direction. In contrast to the highly 'lootable' assets in a petroleum, investments in infrastructure, education and health are difficult to loot. In turn, the perverse effects on incentives to invest in institutional capacity created by a petroleum fund are not present. Indeed, they may be turned on their head; higher levels of human capital, infrastructure and health empower the population, which, in turn, increases the demand for inclusive institutions (Acemoglu and Robinson, 2012).

The same three channels that produce negative externalities with a petroleum fund, may, with alternative use, produce positive externalities: The incentives for entrepreneurs is shifted towards production and away from rent-seeking, the quality of institutions may improve, and these two effects in tandem make it more attractive for private entrepreneurs to invest.

Concluding remarks and policy implications

The direct financial return of a petroleum fund is the same for developing and developed countries. However, using incomes from petroleum to invest in infrastructure, education and health creates higher societal returns for a developing than for a developed country.

Establishing a petroleum fund in a weakly institutionalized setting may produce perverse incentives for entrepreneurs to engage in rent-seeking rather than in productive activities, and for politicians to weaken rather than strengthen institutional quality. On the other hand, investing in infrastructure, human capital and health creates incentives for production rather than rent-seeking, and may improve institutional quality. The payoff for Tanzanian society is most likely much higher by using petroleum revenues to invest in infrastructure, health and education, rather than to establish a petroleum fund to invest in foreign assets.

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PART III:

Ensuring economic benefits from the petroleum sector: Perspectives on local content policies, practices and sector linkages

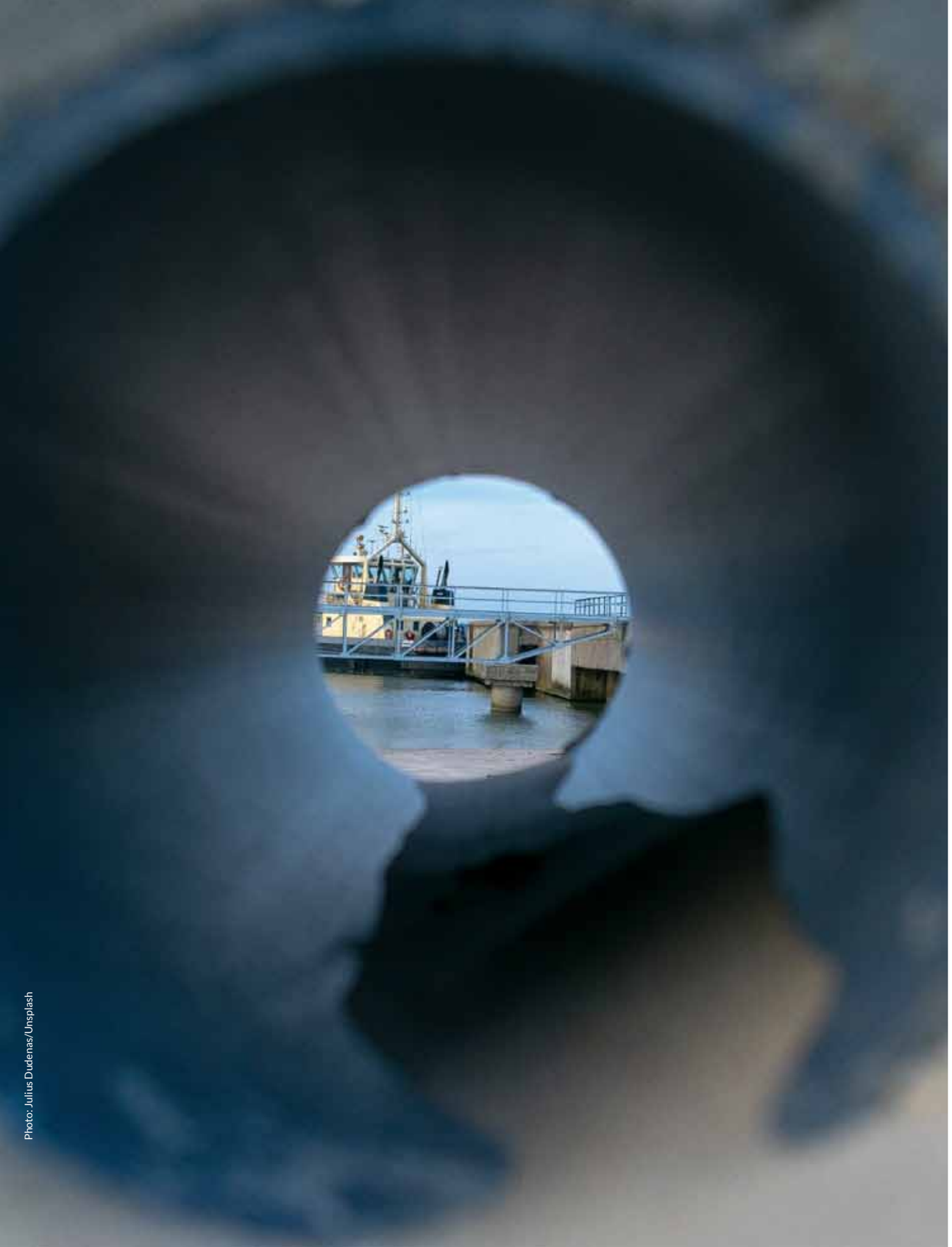

Photo: Julius Dudenas/Unsplash

Beyond the direct economic benefits of the petroleum sector, such as revenues from taxes and royalties, policies for local content are among the most important tools for host governments to extract additional domestic benefits from foreign investments. Knowledge on local content policy design and implementation is, therefore, vitally important to understand the division of labour in the sector and to identify potential areas for collaboration between domestic companies and foreign investors.

The Norwegian model for local content is often referred to given the country's success in designing and implementing local content policies (LCPs) during the development of the petroleum sector based on its offshore oil deposits in the North Sea. LCPs were first introduced in Norway in the early 1970s and ranged from restrictions on imports to direct state participation in the oil sector through the establishment of state-owned companies in upstream and downstream operations.

Internationally, LCPs have evolved significantly since that time. Earlier local content initiatives were focused upon creating backward linkages, for example, utilizing domestic suppliers for inputs in the petroleum industry, creating local employment opportunities and increasing local ownership and control. Today, there is a much stronger focus on creating forward linkages by facilitating the domestic processing of outputs of the industry before export, for example, the development of LNG refineries and the use of natural gas to produce fertilizers.

In addition to local content policies in these conventional senses, a broader strategy for creating sectoral linkages is crucial. The petroleum sector, or the natural gas sub-sector, should not be allowed to remain as an enclave, but integrated with other sectors to promote a diversified and resilient economy. Some resource-rich countries have managed successfully to use their extractive resources to develop non-resource sectors, by focusing national efforts on using oil and gas resources to build domestic technological and manufacturing capabilities. For example, in Malaysia and Brazil, the petrochemical industries as well as the fabrication of machinery and equipment (as inputs for both oil and non-oil industries) were developed alongside the petroleum industry. The technology was quickly transferred to the automotive and electronics industries, electronic manufacturing, and into services and other non-resource sectors. There are also success stories from Thailand, Indonesia and Chile, all of which have managed to transform their economies from ones highly concentrated on primary sectors to diversified economies with vibrant manufacturing bases. In Norway, the Netherlands and Malaysia, economic activities around oil and gas constitute relatively small shares of their revenue and exports, even with high volumes of reserves and production. Each of these countries deliberately placed emphasis on establishing industries which gave them competitive advantage, using oil and gas as leverage.

In Tanzania, huge potential exists in promoting light manufacturing and industries that add value to the country's natural resources, for example, in agriculture and agro-processing, in tourism, and in logistics and related business services. The petroleum industry can contribute by generating affordable and reliable energy for industrial use and transportation, and in services. Given that utility costs

constitute a significant proportion of production costs, the progress towards better energy efficiency is one of the key enablers of competitiveness. The country has the opportunity to find an appropriate energy mix (which includes LNG) that takes into account the relative opportunity costs of various energy sources, the security of energy supply, the rapid development of new technology, and the declining costs of renewable sources.

Given its importance, the five chapters in this part of the book explore different aspects of the local content regime in Tanzania. Chapter 10 asks the pertinent question of who is responsible for implementing, overseeing and enforcing local content regulations and provisions related to the gas and mineral sectors in the country. It reveals a confusing array of regulatory agencies with overlapping mandates. Chapter 11 then summarizes results from a 2015 study of stakeholder perspectives on local content and the process implemented by the Tanzanian government to draft the country's first LCP and the subsequent enactment of the Petroleum Act 2015 that includes local content provisions. Chapters 12 and 13 examine local content within the context of rising resource nationalism in Tanzania and other African states, and identify lessons learned from the country's experience in the mining sector that can valuably be applied to the emerging gas sector. Chapter 14 then looks at the importance of integrating the extractive sector with other economic sectors and the potential for linking the agriculture sector with the emerging petroleum sector through food value chains.

10. Local content in Tanzania's gas and minerals sectors: Who regulates?

Jesse Salah Ovadia

The implementation of Tanzania's local content policy for the petroleum and mineral sectors has been hampered by inconsistency, confusion and under-coordinated donor interventions. This chapter argues that overlapping institutional mandates need to be replaced by clear lines of regulatory authority to advance Tanzania's vision of leveraging its gas and mineral wealth for industrial transformation. This is particularly important in the areas of training and skills development, the development of small and medium enterprises, and the monitoring and enforcement of regulations.

Local content: Capturing economic benefits from the petroleum sector

Local content policies encourage local employment and the use of local goods and services in the backward-linked supply chains of companies active in a given country (Shangvhi, 2016; Kolstad & Kinyondo, 2016). While LCPs can apply to both foreign and domestic companies, they often focus on foreign direct investments (FDIs) to produce greater economic benefits through value addition. In Tanzania, as in much of Africa, these policies take the form of targets for local participation and various reporting mechanisms (Lange & Kinyondo, 2016; World Bank, 2016; Kinyondo & Villanger, 2017). A more expansive definition would also include economic empowerment as part of local content (VSO, 2014). In whatever form, LCPs require capable and effective institutional oversight on the part of the government. The importance of strategic direction from an autonomous and empowered government institution is illustrated by the experiences of state-led development in East Asia (Wade, 1990; Evans, 1995).

The interest in local content from governments in resource-rich developing countries is partly due to the realization that FDI does not, on its own, produce more positive outcomes than negative ones for the host country. Since the mid-2000s, several African countries, including Angola and Nigeria, have put in place LCPs to maximize the benefits from resource extraction (Ovadia, 2016a & 2016b). In Tanzania, the first *Oil and Gas Local Content Policy* was formulated in 2013 but later merged in the 2015 *National Energy Policy*. The framework was geared at increasing the level of participation of Tanzanian businesses and citizens in the entire oil and gas value chain (URT, 2016).

New legislation on natural resource management in Tanzania

Major changes in the legal landscape for natural resource management started with the passing of the *Petroleum Act, the Tanzania Extractive Industries (Transparency and Accountability) Act* and the *Oil and Gas Revenues Management Act* in 2015. On the basis of the *National Energy Policy and the Petroleum Act 2015*, the *Petroleum (Local Content) Regulations of 2017* were established. The Regulations govern the local content matters related to upstream, midstream and downstream activities in mainland Tanzania. Both the Act and the Regulations require the licence holder, contractors, subcontractors and licencees to give preference to Tanzanian citizens in employment and Tanzanian companies in buying goods and services. Foreign companies that seek to participate in the supply of goods and services to operators in the sector are obliged to ensure that at least 25% of the business is owned by Tanzanians or a Tanzanian company.

One of the fundamental challenges in implementing local content provisions is the lack of effective regulatory oversight.

In early July 2017, the Parliament of Tanzania, under a certificate of urgency, passed three new Acts on natural resource management: (1) The Natural Wealth and Resources Contracts (Review and Re-negotiation of Unconscionable Terms) Act; (2) the Natural Wealth and Resources (Permanent Sovereignty) Act; and (3) the Written Laws (Miscellaneous Amendments) Act. These Acts imply a significant change to the legal regime underpinning the management of Tanzania's mining and petroleum sectors. The new legislation will have far-reaching impacts on contractual arrangements in the extractive sectors as companies will have to comply with local content, corporate social responsibility and integrity pledge provisions.

Overseeing local content provisions: A confusing array of regulatory agencies

One of the fundamental challenges in implementing local content provisions is the lack of effective regulatory oversight. Although Tanzania has taken many positive steps in directing and overseeing resource extraction, at least nine different government agencies and parastatals have direct regulatory authority over different aspects of petroleum and mining, along with a variety of secondary regulators and more peripheral agencies (see Figure 10.1). At the centre are the Ministry of Energy (MoE) responsible for petroleum resources, and the Ministry of Minerals (MoM) with commissioners directly under the Minister. Other ministries, such as the Ministry of Home Affairs, have direct regulatory authority over some related areas, such as immigration.

FIGURE 10.1
Agencies involved in policy making and regulation of resource extraction in Tanzania

REGULATORS

- Ministry of Energy – Petroleum
- Ministry of Minerals – Mining;
- Tanzania Mining Commission (TMC)
- State Mining Corporation (STAMICO)
- Petroleum Upstream Regulatory Agency (PURA)
- Tanzania Petroleum Development Corporation (TPDC)
- Energy and Water Utilities Regulatory Authority (EWURA)
- National Economic Empowerment Council (NEEC)
- Public Procurement Regulatory Authority (PPRA)

POLICY AGENCIES

- Office of the President
- Prime Minister's Office
- Tanzania National Business Council (TNBC)
- Other Ministries

On the mining side, the Commissioner for Minerals retains regulatory authority from a policy point of view, but is assisted by the Tanzania Mining Commission (TMC). TMC is empowered to regulate the implementation of the *Mining Act*, including the granting of mineral rights such as mining licences, and to monitor and audit mining operations, with the objective of maximizing government revenue. It has no official role regarding local content. The state mining company, STAMICO, has little direct involvement in local content, though it holds the state's interest in some of the country's biggest mines.

On the petroleum side of the Ministry of Energy, the Commissioner seems to have less authority over the sector, particularly with the passage of the *Petroleum Act* in 2015, which created the Petroleum Upstream Regulatory Authority (PURA). The authority is mandated to regulate and monitor petroleum upstream operations and LNG activities in mainland Tanzania and provide advisory services to the Government and the Minister responsible for petroleum affairs. PURA is also mandated to oversee implementation of LCPs in upstream operations. The Tanzania Petroleum Development Corporation (TPDC) plays a more direct role in implementing oil and gas LCPs compared to STAMICO in the mining sector. In the midstream and downstream petroleum value chain, the Energy and Water Utilities Regulatory Authority (EWURA) is vested with mandates to regulate technical, economic and safety affairs. EWURA also maintains a database of the Tanzania Local Suppliers and Service Providers (LSSP) containing details of local

suppliers, service providers and other entities that meet the requirements of the petroleum industry of Tanzania (see Annex 4 for further details).

Which of these agencies has the power to regulate the oil and gas industry, and how they share authority over local content policy is not clear. Further, it is not clear how they share authority over local content policy. As stated in the new laws, however, PURA regulates the upstream, while EWURA regulates the mid- and downstream segments of the value chain. NEEC is an overseer of LCP and have no mandate on the specific sectors. To complicate matters, in October 2015, the Government empowered the National Economic Empowerment Council (NEEC) with a mandate to coordinate the government's local content policy. NEEC, which is under the Prime Minister's Office, has set up a Local Content Department to champion the implementation of local content issues, and has appointed focal points within each ministry and parastatal to coordinate the promotion of local content in their respective institutional areas.

Of further relevance, the regulatory framework for public procurement is established in the *Public Procurement Act* (2011) and overseen by the Public Procurement Regulatory Authority (PPRA). This Act makes it easier for Tanzanian companies to compete for government contracts, including from parastatals such as TPDC and STAMICO. In theory, the Act applies to most major natural gas and mining projects, though in practice it is not clear if it does or how well TPDC and STAMICO have adhered to the law.

Taken together, these overlaps and lack of clarity have made it challenging for different agencies to work together effectively. In the case of Tanzania's emerging gas sector, TPDC, MoE, PURA, and EWURA must work with the Prime Minister's Office and NEEC, TNBC, the Oil and Gas Advisory Bureau (OGA) and the Uongozi Institute. At the time of writing this chapter, OGA - which was meant to be a national think-tank on matters relating to oil and gas - had been disbanded. The Uongozi Institute has been involved in research and training for government officials on various aspects of petroleum and minerals policy, including local content.

The impact of the existing local content governance system

Training and skills development, the development and support of small and medium enterprises, and the monitoring and enforcement of regulations are three key areas for public sector intervention to optimize local content from the petroleum sector. In the following sections, the impact of the present governance system on each of these three areas is discussed.

Impact on training and skills development

To deliver the Government's local content ambitions and meet the demands of the petroleum industry, the availability of qualified local personnel and companies is essential. A coordinated and integrated capacity building programme is therefore needed to prepare Tanzanians to benefit from the local content programme. However, when it comes to training and skills development, a large number of government agencies with overlapping authority are involved (see Figure 10.2).

To start, the NEEC plays an important role but its role overlaps with other agencies. At the same time, the Ministry of Education, Science and Technology and the Vocational Education and Training Authority (VETA) are involved in training and skills development for the extractive industries. There are also numerous national and international organizations working on similar projects with similar goals. Likewise, the oil and gas companies themselves have the obligation to develop local capability.

FIGURE 10.2
National and international agencies involved in training and skills development

NATIONAL

- Ministry of Education, Science and Technology
- Vocational Education and Training Authority (VETA)
- National Economic Empowerment Council (NEEC)
- Ministry of Energy.

INTERNATIONAL

- World Bank
- United Nations Development Programme (UNDP)
- Department for International Development (DFID)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Norwegian Agency for Development Cooperation (Norad)
- Voluntary Service Overseas (VSO)
- International oil, gas and mining ompanies
- Business associations

The Ministry of Education, Science and Technology plays a central role in training and skills development through the primary and secondary school systems, higher education and vocational training. VETA coordinates, regulates and provides vocational education and training. NEEC operates separately from the Ministry, although with a high level of coordination in the emerging natural gas regions of Lindi and Mtwara. The Ministry of Energy also has projects related to skills development in those regions.

Several development organizations such as the World Bank, UNDP, DFID, GIZ, Norad, VSO and others support training and skills development, often in partnership with NEEC and/or VETA. These organizations also collaborate with the major international oil, gas and mining companies to align their training with the needs of the extractive industries. While there are some excellent initiatives making impressive contributions to the country's development, there are also many project overlaps, especially among initiatives focused on Lindi and Mtwara. Yet, the needs for training and skills development are huge and certain overlaps are unavoidable.

Impact on the development of small- and medium-sized enterprises (SMEs)
As international oil and mining companies adjust their procurement policies to buy more from local companies, the Government is seeking to support the development of small and medium enterprises as part of its overall local content strategy. Again, however, extensive institutional overlaps exist in capacity building initiatives for SMEs.

NEEC has several programmes related to SME development, even though this is officially part of the Small Industries Development Organization (SIDO), an agency under the Ministry of Industry and Trade. Additionally, the Tanzania National Business Council (TNBC), the Tanzania Entrepreneurship and Competitiveness Centre (TECC), and the Tanzania Investment Centre (TIC) also play supporting roles, as does the Ministry of Health, Community Development, Gender, Elderly and Children (see Figure 10.3). These challenges are exacerbated by the lack of direction and coordination from SIDO, which seems to have the clearest authority in this area. The lack of leadership opens the door for NEEC, TECC and others to get involved without effective coordination, thus increasing the likelihood of conflicting signals and direction.

FIGURE 10.3
National and international agencies involved in small and medium enterprises

NATIONAL

- Ministry of Industry and Trade
- Small Industries Development Organization (SIDO)
- National Economic Empowerment Council (NEEC)
- Tanzania Entrepreneurship and Competitiveness Centre (TECC);
- Tanzania Investment Centre (TIC);
- Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA)
- Tanzania Private Sector Foundation (TPSF)

INTERNATIONAL

- World Bank
- United Nations Development Programme (UNDP)
- International Labour Organization (ILO)
- Department for International Development (DFID)
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
- Norwegian Agency for Development Cooperation (Norad)
- Voluntary Service Overseas (VSO)
- International oil, gas and mining companies
- Industry associations

Non-governmental organizations and private sector interest groups are also active in promoting SME development (VSO, 2014). The Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) and the Tanzania Private Sector Foundation (TPSF) appear to serve largely the same purpose, and are both active in SME development. TNBC provides oversight in parallel to SIDO and others.

As for training and skills development, the same international institutions and oil, gas and mining companies sponsor initiatives related to SMEs. However, in this case there are even more direct institutional and project overlaps and seemingly less coordination. The Tanzanian financial sector is also involved, especially on the issue of access to finance. Consequently, SMEs may not know where to go for support, while international investors may have difficulties in identifying local companies that could be partners or suppliers. As key initiatives such as business support/enterprise development centres are contemplated by multiple donors and government agencies, the risk is that competing centres will be set up. This may further complicate the drive to increase the participation of local enterprises in the extractive industries.

Impact on the monitoring and enforcement of the Petroleum (Local Content) Regulations 2017

With so much overlapping authority regarding the implementation of LCPs, it is unsurprising that the local content regulations required under the Petroleum Act leave many questions unresolved. Among the different agencies, there are different approaches to local content, even varying definitions of what local content means. This has led to confusion and inconsistencies between official policies, laws and regulations in terms of what local content is and what constitutes a local company. For instance, the *National Energy Policy* defines "local business" as one in which at least 51% of the shares are owned by Tanzanian nationals, while the *Petroleum Act, 2015* requires the ownership of Tanzanians in a local company to be not less than 25%.

Various agencies are navigating issues of overlapping authority as they arise instead of taking an integrated approach to optimizing local content. The same is occurring with regard to the question of who regulates midstream petroleum projects (such as the proposed LNG processing facility), as well as with the question of what mandatory targets for local participation should be set and in which areas.

At the same time, it appears likely that some agencies will be left out of the process of monitoring and enforcing LCPs. One example is NEEC's empowerment initiatives for small businesses, especially those involving women and youth. Lacking an official role in monitoring and enforcement may also make it difficult for agencies such as SIDO and VETA to implement projects that fall clearly within their mandates. In other cases, without a single government authority to monitor and enforce the local content regulations, it is more likely that international development agencies and private companies will design and implement projects targeting training, skills development and SMEs without inputs or coordination from the Government.

Overlapping authority also may make it more difficult to align policies in areas as diverse as special economic zones, immigration, foreign investment, public procurement, education, financial services, and standards with the overall local content strategy.

Concluding remarks and implications for policy

The local content programme, if implemented correctly has the potential to empower Tanzanian enterprises and citizens to benefit from the petroleum sector. To realize this goal, integrated oversight is required to ensure no under- or over-regulation of the sector. In order to address overlapping authority, there is a need for clarity on LCPs, related policy areas, and institutions and structures for government oversight. Two policy recommendations are put forward for consideration:

First, the institutional authority for local content with respect to training and skills development and SME development with the petroleum and mining sectors needs to be clarified and streamlined. Second, continued efforts to coordinate the programmes of the various government agencies involved as well as the activities of international companies, civil society organizations, the media, labour unions and affected communities are important to ensure transparency and accountability in local content implementation.

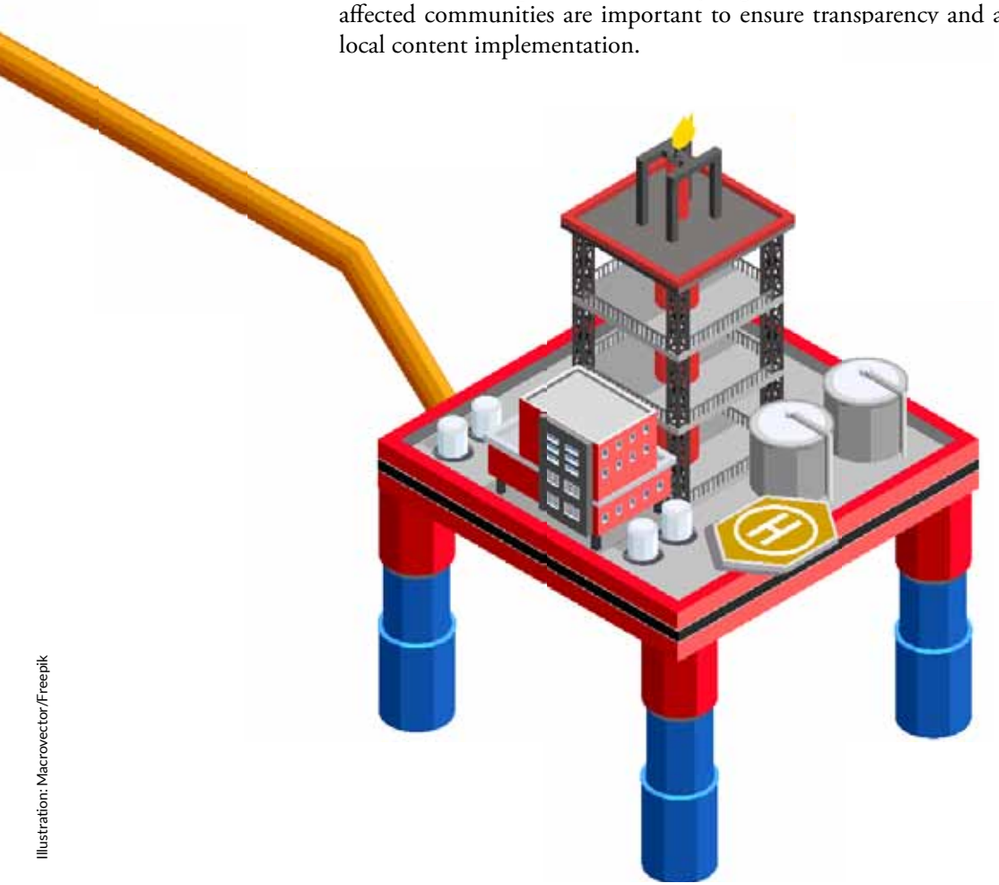

Illustration: Macrovector/Freepik

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11. Stakeholders' perspectives on local content policies in Tanzania

Abel Kinyondo and Espen Villanger

The discovery of large offshore deposits of natural gas has triggered national debates on how these resources could be best managed to benefit Tanzanian society and contribute to long-term economic and social development. This chapter presents the main findings from a 2015 study on stakeholders' perceptions of the Government's local content policies (LCPs). While the research revealed widespread support for LCPs, the Government was criticized by stakeholders for not conducting a transparent and inclusive consultative process, which may undermine ownership and implementation of the LCPs. The current analysis followed the legislative process from the first draft of the LCP, published in May 2014, to the *Petroleum Act*, passed by the Parliament in July 2015 and approved by the President in December 2015.

Introduction: The importance of a consultative process to develop LCPs

Local content policies have been applied both in developing and developed countries as a tool to create jobs, promote enterprise development and accelerate the transfer of skills and technologies (Ovadia, 2016). Yet, LCPs are controversial (Hansen et al., 2015; Kolstad & Kinyondo, 2015) as they may entail a redistribution of benefits which can trigger non-productive rent-seeking and corruption. Also, inherent difficulties exist in the ambition of LCPs to bring developing country labour and companies into the high-tech petroleum business (Tordo et al., 2013). The high level of skills, knowledge and technology required poses a barrier that is sometimes insurmountable within the project period. This mismatch can be hard to comprehend for parties outside the petroleum value chain.

Hence, the challenges and complexities posed by the introduction of a LCP underline the need for a thorough consultative process with stakeholders. Consultation can be an effective approach for the Government to communicate with stakeholders, inform them about plans and requirements for their participation, as well as to manage expectations (Kinyondo & Villanger, 2017). Openness and transparency are also considered important tools for avoiding corruption and favouritism. Finally, an effective consultation process can create a dialogue that may provide a platform for a broader mutual understanding among stakeholders regarding the challenges

involved in the employment of such policies. This communication may, in turn, build trust and reduce tensions and conflict.

The context of the LCP consultative process in Tanzania

In May 2014, the then Ministry of Energy and Minerals published the first draft of the LCP for the oil and gas industry in Tanzania. The aim of the LCP was to ensure that more Tanzanians are employed in the petroleum sector and that local companies become suppliers of goods and services to the petroleum industry. At the same time, the Ministry sent out a press release inviting all stakeholders to provide inputs and suggestions to the draft. Comments had to be submitted within 13 days. This short deadline proved to be challenging for many stakeholders.

By giving stakeholders less than two weeks to respond to the draft LCP, and only four days to provide comments on the petroleum bill, the Government made it impossible for stakeholders to organize and provide well-founded feedback on key elements of the LCP. As a result, most of the LCP activities such as roundtable discussions and seminars were conducted in an ad hoc manner by a few well-organized stakeholders, such as the international oil companies (IOCs), thereby leaving out other important stakeholders like academics and civil society organizations.

In a bid to redress the situation, opposition parties and civil society groups protested and called for public hearings. Several stakeholders expressed concern over the urgency in the making of this policy, arguing that it hindered inclusive, open and informed participation of citizens, industry stakeholders and legislators. In the end, these efforts were unsuccessful. In July 2015, the *Petroleum Act*, which included many local content requirements, was passed by the Parliament under a "certificate of urgency" clause allowing only cursory examination by the Parliamentary Committee for Energy and Minerals.

Study methodology

To assess stakeholders' perceptions about the LCP and the Government's legislative process, interviews were carried out with approximately 40 stakeholders with a direct interest in the development of a LCP: government officials, civil society organizations, educational institutions and the private sector, including IOCs. Interviews were also conducted with representatives of the principal donors involved in the LCP process, who all had strong commercial interests in the natural gas sector in Tanzania. They included the United States of America, the European Union, the United Kingdom, Germany, Denmark and Norway. The interviews were conducted in February and December 2015 using a semi-structured questionnaire, allowing open-ended answers to guide the interviews. In addition to the formal interviews, feedback on the draft findings was requested from various stakeholders. In addition, a literature review was completed to better understand the context and to develop hypotheses and research questions for the study.

Findings

The study found that most stakeholders interviewed were positive towards local content requirements but were critical of the Government's handling of the consultation process. Key findings from the study are summarized in the sections below.

LCP can be a tool for generating jobs and business growth

The study found strong consensus among academics, NGOs, government institutions, donors and the international oil companies (IOCs) that the LCPs have potential to generate employment for Tanzanians. Employment generation was perceived to be the most important goal of the LCP. Across all categories of stakeholders, respondents stated that an LCP could be instrumental in creating more jobs for Tanzanians in the petroleum sector as well as encouraging employment more broadly in other sectors. However, they warned about the possibility of corruption, which they feared would reduce or even remove the positive effects of the LCP. All the stakeholders interviewed, including the IOCs themselves, held the view that the IOCs should contribute to the development of the local economy. Domestic stakeholders generally thought that if no requirements were set, the local population would benefit very little and the petroleum companies would keep most of the surplus.

According to the stakeholders interviewed, capacity building and skills transfer was the second most important goal of LCPs. However, skills transfer and building local capacity take time and the stakeholders emphasized that the LCP needed to have a long-term perspective. To ensure the longevity of the LCP, the Government should develop a direct link between the activities of local organizations, colleges and universities, and the petroleum sector.

The stakeholders also agreed that the LCP should ensure that local companies are given opportunities to participate in the petroleum sector by establishing requirements for the IOC's use of local goods and services in their operations. However, requirements for purchasing locally produced goods and services will have no effect if domestic companies are unable to deliver according to required quality standards. To achieve this, one stakeholder suggested that the Government should provide incentives to the IOCs to support capacity building of local companies. He argued that this was important because "a gradual and strategic build-up of local capacity is usually the most effective way to develop sustainable business".

The absence of a consultative process undermines local ownership

The general view among all the stakeholders interviewed was that the government did not organize a proper consultative process about the local content policy. Stakeholders argued that this omission was a major challenge to the LCP. Involvement of stakeholders is essential to create a sense of ownership of the policy and thus to improve the chances of successful implementation.

The lack of a comprehensive consultation process during the development of the Tanzanian LCPs limited stakeholder participation in the policy debate. Only the IOCs and a few selected donors were invited for discussion by the Ministry of Energy and Minerals, while many government agencies, think tanks, universities and civil society organizations were left to organize their own events, mostly after the deadlines for submitting comments had passed. Thus, many relevant stakeholders – who did not have the resources or alternative mechanisms for organizing such events (or the network for participating in others' events) – were excluded from the decision-making process. The exclusion of universities and local intellectuals from the discussion was a mistake. Local organizations perceived this oversight as an invitation to foreigners to secure their own interests above those who could provide suggestions on how the resources could benefit most Tanzanians.

A high degree of suspicion and mistrust exists between key stakeholders

The study revealed a high degree of suspicion between key stakeholders. In particular, stakeholders from both the public and private sectors argued that the Ministry of Energy and Minerals monopolized the process and kept other government authorities and non-state actors out of the LCP development process. Many stakeholders also argued that the Government had weak implementation capacity. This combined with corruption could jeopardize the implementation of the LCP.

Among domestic stakeholders, there was a high degree of suspicion against foreign companies. Many believed that the IOCs would do whatever they could manage to avoid implementing any LCP. These stakeholders considered the LCP as an important tool to ensure that the IOCs contributed to developing the Tanzanian society.

Stakeholders fear that the lack of proper consultations about the local content policy has led to a sense of distrust in the policy and its implementation.

Discussions about the type of requirements that should be imposed focused on the degree of flexibility that could be allowed. Those who advocated for strict, non-negotiable requirements did so because they feared that the IOCs would use flexibility as an excuse for not implementing the LCP. Generally, the stakeholders interviewed considered employment generation requirements as less risky compared to requirements intended to engage local companies in supplying goods and services to the petroleum sector. Many of the stakeholders expressed distrust of the government´s political will to implement the LCP in an effective and fair way. In addition, they argued that there was a high risk of mismanagement due to lack of institutional capacity to implement the policy. Stakeholders feared that weak capacity, corruption and unproductive rent-seeking could jeopardize their implementation of the LCP.

Overall, the high degree of mistrust between key stakeholders, and the difficult business climate arising from widespread corruption and patronage, could undermine the implementation of the LCP in the country. Stakeholders claim that the lack of inclusion has led to the absence of local ownership to the LCP, and that it has added to an overall sense of distrust of the policy and its implementation. Stakeholders fear that this distrust may reduce the likelihood of success as many institutions, which are vital to the LCP implementation, were excluded from the consultation process.

Concluding remarks and policy implications

The study reported in this chapter shows that while there is widespread support to LCPs among stakeholders in Tanzania, the government is criticized for not conducting a transparent and inclusive consultative process. This may weaken the implementation of the local content policies. Based on the evidence collected by the study, a series of recommendations are offered for consideration by government policy makers.

Preventing corruption

Stakeholders outside the government should be assigned a role to support prevention of corruption, for example, through rigid transparency checks. The high degree of suspicion and lack of trust between stakeholders both within the public sector, between public and private sector actors, and among private sector stakeholders hamper an effective policy dialogue and is likely to impact implementation of the LCP. Without external checks, and if the LCP is left entirely to the government to handle, there is a high likelihood that the policy will generate avenues for rent-seeking and corruption.

Employing non-negotiable requirements

Stakeholders recommended the inclusion of strict non-negotiable requirements in LCP provisions to ensure that benefits will accrue to Tanzanians. This would also prevent IOCs from taking undue advantage of the flexibility in the LCP.

Enhancing trust

It is important to develop trustworthy relations between stakeholders by investing in comprehensive and transparent monitoring and evaluation systems for LCP implementation, and to make it clear to all stakeholders both what has been done, and not done.

Ensuring inclusive, in-depth consultation

Future policy development should include in-depth consultations to maximize the decision makers' knowledge base, add to the transparency of the process and manage expectations. This approach might also contribute to effective implementation and reduce tensions, conflicts and suspicion among stakeholders.

Promoting knowledge transfer

Knowledge transfer between companies is an essential component of strengthening domestic capacity, and huge potential exists for domestic firms to learn from the extractive sector. Stimulating spillovers may not only be important for local companies that provide supplies to the extractive industry, but also for the local industries' ability to develop in other sectors. The high level of technological complexity and its use of specialized inputs and knowledge equip these companies with tools that can be adapted and used in other industries. Cluster development and regional trade can be used to promote such spillovers, as clusters may facilitate innovation and technology transfer.

Expanding training and skills development

The shortage of qualified employees is a key obstacle for achieving local content in almost all resource-rich countries. Therefore, education and skills development at all levels will need to be a fundamental aspect of LCP provisions.

Simplifying LCP administration

The Government must keep the administration of the LCP simple and transparent. The costs of complying with complex requirements may be high, which, in turn, may make it harder to detect corruption, especially if transparency is low. It is important to incorporate measures which acknowledge that corruption is generally more prevalent in extractive industries than in other sectors.

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12. Resource nationalism and local content in Tanzania: Experiences from the mining sector and consequences for the petroleum sector

Siri Lange and Abel Kinyondo

Over the last decade, local content has received increasing attention in resource-rich developing countries. Local content policies and legislation typically require investors to purchase a certain percentage of goods and services within the host country, and to train and hire national staff. In sub-Saharan Africa, at least 11 countries have recently formulated local content policies for their oil and gas industries or are in the process of doing so (Ovadia, 2012, 2014; Ablo, 2015). The main goal of local content initiatives is to increase the economic benefits from natural resource extraction (Hansen et al., 2016). Local content is also seen as a potential solution to the sky-high rates of unemployment among youth on the continent, envisaged to possibly reduce social unrest and violence and contribute to the industrialization of resource-rich countries.

Introduction

Since large reserves of natural gas were discovered in 2010 in Tanzania, there have been heated debates on local content in the petroleum sector, and international oil companies have faced strict restrictions on work permits for expatriates. This is a requirement that companies find inappropriate since, in their view, workers with the necessary competencies are not yet available in Tanzania.

While scholars have addressed different aspects of "resource nationalism" (Andreasson, 2015; Wilson, 2015), this chapter argues the importance of viewing resource nationalism from an historical perspective and examines the factors that drive a country to adopt new policies (Lange & Kinyondo, 2016; see also Chapter 13). Resource nationalism is here defined as the desire of government to exert high levels of authority over the resources on their territory in order to reap the benefits of their extraction. The analysis is based on interviews conducted with a broad range of stakeholders in Tanzania, including two international mining companies, government representatives at central and local levels, civil society organisations and academics. The study also examined the companies' quantitative reporting on local content as well as official statistics.

When Tanzania opened up for foreign investment in the mining sector in the late 1990s after more than 20 years of state control of natural resources, the country adopted liberal market policies, including generous tax incentives for investors (see Chapter 3). This decision was influenced by pressure from multinational financial institutions that spearheaded structural adjustment and economic reform programmes, rather than the result of independent, domestic policy choices alone.

Over the last twenty years, large-scale mining has not only generated low revenues but it has also created limited space for local content (Lange & Kinyondo, 2016). In turn, this situation has fuelled strong sentiments of resource nationalism in Tanzania. The 1998 *Mining Act* largely favoured the interests of mining companies and generally ignored local content stipulations as enshrined in the 1979 *Mining Act*. However, in the revised *Mining Act 2010*, the mining royalty rate was increased and a government share in new large mines was introduced (URT, 2013). The Act also introduced soft clauses on local content.

The context of resource nationalism in Tanzania

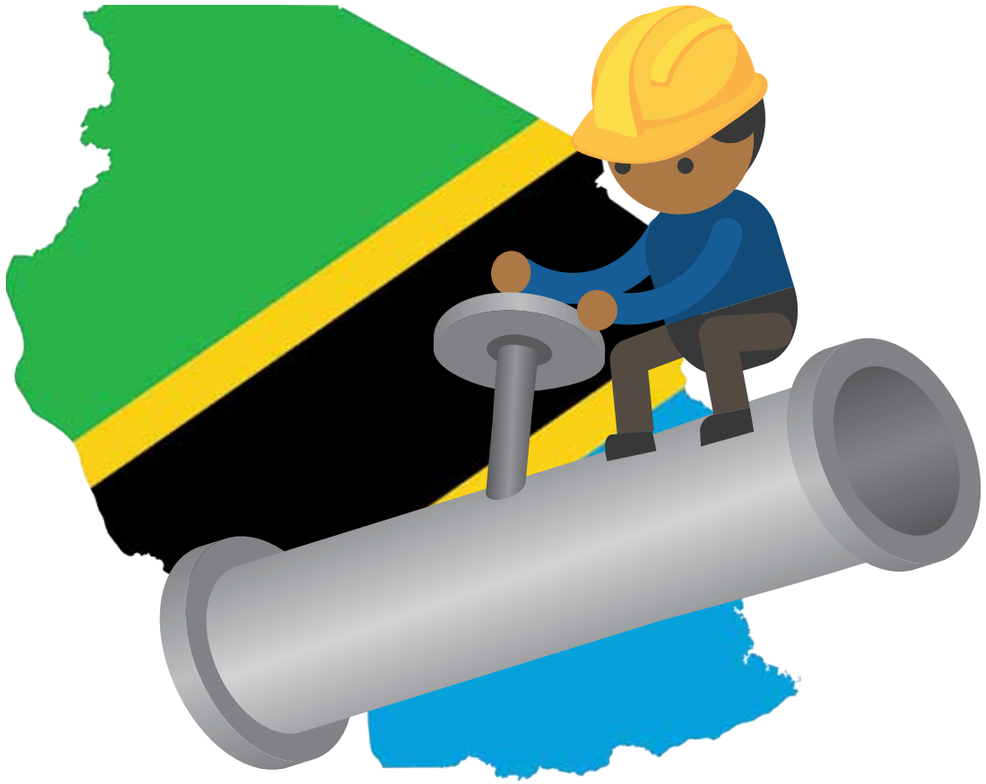
Currently, Tanzania fits into the 'developmentalism' category of resource nationalism, wherein the popular legitimacy of the government depends on its ability to deliver development, industrialization and social services, including local content, to citizens. Countries that have followed this approach include Chile, India and Indonesia (Andreasson, 2015; Wilson, 2015).

It is crucial though to contextualize this classification for Tanzania. Unlike Chile and the other countries mentioned above, Tanzania has a very low level of industrialization and relatively poor infrastructure. Against this background, key respondents interviewed for this study acknowledged that given poor institutions and infrastructure, and limited human capital in the country, strict local content clauses may be difficult to achieve, and in some cases counterproductive.

The realities and difficulties of implementing local content in Tanzania stand in contrast to the sector's regulatory framework. The newly promulgated *Natural Wealth and Resources (Permanent Sovereignty) Act, 2017* seems to overrule the local content provisions in the *Petroleum Act, 2015*. Further, the *Non-Citizens (Employment Regulations) Act, 2015* places restrictions on the hiring of expatriates. From fiscal year 2016/17, in addition to the mining and gas sectors, the National Economic Empowerment Council (NEEC) has also identified the agriculture, construction and manufacturing sectors as priority sectors for increasing local content. This demonstrates the need to examine local content requirements across the country's legislative framework as a whole, rather than focusing exclusively on the mining and/or petroleum acts.

Challenges in implementing local content policies

Interviews with local communities and other stakeholders in Tanzania confirmed findings from other African countries, which show that local content is easily



subjected to elite capture and patronage. Generally, countries with weak institutions are riddled with rent-seeking behaviour and patronage (Kolstad & Kinyondo, 2017). One challenge is that foreign investors do not properly scrutinize the ethical standards of their suppliers, some of which are taking advantage of and mistreating smaller local suppliers, as well as their employees (Wiig & Kolstad, 2010).

The public discontent with the mining sector affects peoples' sentiments about investors in the petroleum sector. The 2013 riots in Mtwara (see Chapter 3) were not directed against the IOCs, but rather at the Government, in disappointment over perceived lost employment opportunities when it was decided to transport natural gas through the pipeline to Dar es Salaam rather than building a processing plant in Mtwara (Must, 2018).

IOCs that want to build positive relations with local communities can learn from the efforts of mining companies to increase local employment by supporting local companies and cooperatives to provide services and supplies to the mines. Collaboration with local cooperatives appears to have been a viable way of avoiding elite capture and securing a 'social licence to operate', which may be defined as the consent of local stakeholders for a company to operate. During such endeavours, however, it is important to strike a balance between cooperation with local government authorities and cooperation with cooperatives, in order to avoid fuelling power struggles at the local level.

Concluding remarks and policy implications

Public sentiments in Tanzania are strongly coloured by the 'legacy of resource nationalism'. The *Natural Gas Policy* clearly states that "natural gas resources found in Tanzania belong to the people of the United Republic of Tanzania". The *Permanent Sovereignty Act, 2017* reflects these sentiments. Nevertheless, the present study of resource nationalism in Tanzania suggests that the Tanzanian government is being pulled by two potentially contradictory goals. On the one hand, the country needs to develop policies that increase the economic benefits from natural resource extraction, thereby, avoiding the repetition of past mistakes in the mining sector. On the other hand, the state needs to make the country sufficiently attractive for IOCs to make their final investment decision, in the context of volatile petroleum prices and the perceived risks associated with doing business in sub-Saharan Africa.

The latter includes the risk of 'revolutionary resource nationalism', which some politicians in Tanzania have argued for in the past. For the current government, increased revenues are essential in order to live up to citizens' demands for improved public services and economic development, and the objective to become fully independent of foreign donors. This explains why the prospect of high revenues has so far been prioritized relative to more radical demands of local content.

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13. Resource nationalism in Tanzania: The implications for artisanal and small-scale mining

Abel Kinyondo and Christopher Huggins

Several African countries have recently enacted 'resource nationalist' laws affecting the large-scale mining (LSM) sector. What implications do these reforms have for artisanal and small-scale mining (ASM)? What does resource nationalism mean for cooperation between the two mining sectors, particularly in countries where LSM companies purchase minerals from ASM groups, or support capacity building for ASM? This chapter examines these issues in the case of Tanzania, which enacted a major legal and institutional mining sector reform in 2017.

Introduction

Resource nationalist policies may include greater intervention by the state in the mining sector, increases in royalty rates, and more stringent demands on large-scale mining (LSM) companies regarding where goods and services are purchased, and whether, where, and how profits are saved and repatriated. Local content policies (LCPs) are a major part of resource nationalist strategies in Africa, for minerals, oil and gas (see Chapter 12). In contrast, artisanal small-scale mining (ASM) is typically reserved, either by law or in practice, for nationals, and, thus, it has not featured within conceptual models of resource nationalism. Nevertheless, it is important to consider the role of ASM within a 'resource nationalist' mining approach. In the ASM sector, nationalist approaches are likely to pivot on the relationship between the 'local' and the 'national'; in other words, the distribution of costs and benefits of mining between micro-economies and the macro-economy. This is an important knowledge gap that should be taken up in future research.

At present, resource nationalism largely focuses on LSM. However, policies targeting large-scale mining firms may affect ASM in several ways. For example, if legal disagreements, export bans, or other issues lead large-scale mining companies to suspend production, artisanal miners may encroach on industrial concessions, or LSM-ASM cooperation activities may be put on hold. Agreements between LSM firms and ASM cooperatives are increasingly common in sub-Saharan Africa. Artisanal miners frequently work on, or adjacent to, large industrial concessions, which are often richer in minerals than areas reserved for artisanal mining. Governments may encourage LSM-ASM cooperation, particularly to accelerate formalization of ASM. There are several examples of LSM-ASM cooperation

agreements in Tanzania, including a Multi-Stakeholder Partnership Initiative involving the Government of Tanzania, the World Bank Group, two multinational gold mining companies and an ASM association. This initiative prioritizes capacity building, including through the development of 'model mines' and training centres. The question of whether these kinds of collaboration have been impacted by the recent policy, law and institutional reforms in Tanzania is discussed below.

Mining in post-colonial Tanzania

The first post-independence government led by President Julius Nyerere restricted foreign investment in mining, preferring to wait until the Tanzanian state acquired the technical and financial capacity to engage directly in mining. In 1967, the Arusha Declaration paved the way for Tanzania's brand of African socialism, and most mines were subsequently operated under the State-owned Mining Corporation (STAMICO). In the late 1970s, ASM miners discovered several sites for gemstones. ASM activities were illegal, but miners operated clandestinely on a small scale.

The *Mining Act of 1979* relaxed state control over the sector. While LSM was still restricted to ventures that involved partnership with STAMICO, citizens were now allowed to apply for ASM licences. The mid-1980s saw the gradual dismantling of the Arusha Declaration, characterized by structural adjustments and economic reform programmes supported by international financial institutions, which included privatization of parastatals and retrenchment of workers. The World Bank is said to have heavily influenced the *1997 Mineral Policy*, the *1998 Mining Act* and the *1999 Mining Regulations*, which helped to attract foreign mining investments in Tanzania. This legal framework gave foreign investors exclusive access to prospecting and mining licences at the expense of domestic investors and local artisanal miners.

The 1998 Act also provided powers to the minister in charge of minerals to give preferences to multinational mining companies such as tax exemptions, and negotiate at his or her own discretion, without being restricted by other legal requirements. These powers were later associated with alleged grand corruption (Lange & Kinyondo, 2016). Conflicts between LSM and ASM resulted in violence and several deaths, and many people were forcefully evicted from LSM concessions without adequate compensation. There is general agreement in Tanzania today that the 1998 Mining Act benefitted LSM at the expense of ASM and Tanzanians in general.

It was in this context that Tanzania developed the *Mining Policy 2009* and *Mining Act 2010*, which, according to the Government, would increase mining revenues and reduce conflicts by identifying designated areas for ASM, helping artisanal miners develop into small-scale miners, and ensuring fair compensation for evicted citizens. However, the 2010 *Mining Act* only recognizes small-scale miners who acquired a primary mining licence. As a result, artisanal miners were not perceived as important stakeholders in the Act, which mainly addressed LSM.

Recent negotiations between LSM and the Government

Two Presidential committees were launched in 2017 to investigate allegations

of fraud by several multinational companies. When both committees reported that systematic fraud had occurred, the President ordered new legislation to be immediately drafted. The bills were drafted quickly without wide consultations with key stakeholders, and were passed in July 2017 as amendments to the *Mining Act 2010*.

The *Natural Wealth and Resources (Permanent Sovereignty) Act 2017* emphasizes that natural resources in Tanzania belong to Tanzanians and, thus, they must benefit from them. It requires the Parliament to ensure that all future agreements with LSM companies "fully secure" the interests of Tanzanians. It restricts export of raw minerals, repatriation of funds (companies have to deposit their proceeds locally), and limits dispute resolution in the extractive sector to domestic arbitration processes prior to seeking foreign mechanisms to dispute resolution. Moreover, the Act re-introduces local content requirements (see Chapters 10, 11 and 12).

There is general agreement in Tanzania today that the 1998 Mining Act benefitted LSM at the expense of ASM and Tanzanians in general.

The *Natural Wealth and Resources (Revenue and Re-Negotiation of Unconscionable Terms) Act 2017* mandates the Government to renegotiate or remove terms that the Parliament deems unacceptable, hence weakening the stability clauses embedded in the *Mining Act* of 1998 that favoured foreign investors. Finally, the *Written Laws (Miscellaneous Amendments) Act 2017* establishes the Mining Commission, which essentially takes over responsibilities that were previously carried out by the Mineral Advisory Board (MAB), the previous Commissioner of Minerals, Zonal Mines Offices and the Tanzania Mining Audit Agency (TMAA). The Act also increases royalty rates on diamonds and gemstones, and metallic minerals. Meanwhile the Government will have at least 16% of carried interest while projects are being negotiated. Under this Act, companies are required to list on the Dar es Salaam Stock Exchange and ensure that Tanzanians acquire at least 30% of the floated shares.

Mining stakeholders outside the government find these amendments confusing and have requested much more clarity in the legislation. For instance, they point to the requirement instructing them to deposit their proceeds in local banks, citing not only their limited capacity, but also the fact that deposits in banks are made with the intention to enable the companies to secure future loans from those banks. Local banks may not have the level of liquidity needed to provide such loans. International oil and gas companies have also been alarmed as the laws will affect them, too. Indeed, the law encompasses 'natural wealth and resources', hence, it is not limited to mining.

The significance of ASM in Tanzania

To understand the role of ASM within a resource nationalist strategy, this section highlights its economic and political significance in Tanzania. ASM is one of the largest economic sectors in terms of income generation and job creation. Economically, ASM may represent 10% to 15% or more of the total gold production in Tanzania (Spiegel, 2012), while most gemstone production is artisanal. ASM contributes significantly to the economy. However, most artisanal production is sold informally and, hence, does not contribute to tax revenues to the state.

Tanzania is estimated to currently have between 600,000 and 1 million ASM miners (Marwa & Warioba, 2015), but ASM associations have not been very influential. Artisanal and small-scale miners, therefore, represent a significant but not key political constituency. The President has positioned himself as *'President of the poor, most conspicuously in the mining and agriculture sectors'* (Jacob & Pedersen, 2018, p. 291). An example of this occurred in practice when he instructed the Vice President to rescind an LSM mining licence that would have resulted in 5,000 artisanal miners losing their livelihoods.

Tanzania is characterized by 'legacy resource nationalism' due to the influence of President Nyerere (Lange & Kinyondo, 2016, p. 1103). Statements by the Government on mining largely reflect a legacy form of resource nationalism, with a developmentalist objective. This includes a 'pro-poor' stance with the potential to benefit the ASM sector, albeit within a formalization model, aimed at increasing government revenue, which is likely to be controversial. Raising government revenues from ASM is a challenge, given the informality and legal ambiguities that characterize the sector.

The Government has attempted to increase revenues, for example, by ordering the construction of a wall around a Tanzanite mining area in Simanjiro District to reduce smuggling and tax avoidance. Several initiatives, including the establishment of 'centres of excellence' for ASM and the demarcation of dedicated concessions for ASM, indicate continued state support for formalization of ASM. While it is not clear yet how recent reforms will affect the ASM sector, there are signs that, on the one hand, the 'legacy' model will involve respect for artisanal mining livelihoods; while, on the other hand, the developmentalist state in Tanzania will not hesitate to force artisanal miners to 'formalize' and pay taxes.

Commitments to capacity building and concession allocation for ASM are promising. Nevertheless, interview data suggest that the overall direction of recent mining reforms are unclear to key stakeholders. Key informants in the current research pointed to several areas that need urgent improvement. Overall, they questioned the over-centralization of mining governance, warned against intervention of international players in developing the mining sector's legal framework, pointed to the ambivalent nature of the Government position towards both LSM and ASM, criticised ad hoc reforms that end up eroding institutional memory and capacities, and highlighted the inadequate enforcement of laws.

Concluding remarks and policy implications

The new mining laws do not adequately address challenges facing the ASM sector. They seem to fit the resource nationalism narrative, especially through maximizing economic rents from LSM. Given the importance of ASM, particularly in job creation, the Government cannot afford to ignore this sub-sector. The Government may consider drafting a separate law focusing on ASM and provide adequate resources to enable effective enforcement of mining laws in the country. Some degree of decentralization of decision making is essential. Finally, the mining sector requires better stakeholder dialogue and a transparent platform for monitoring and enforcement of contracts and agreements.

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14. Linking agriculture with the extractive sector through food value chains

Sosina Bezu, Espen Villanger and Abel Kinyondo

For the extractive sector to serve as a catalyst for industrial and economic growth, it must be integrated with the rest of the economy through forward and backward linkages. An extractive sector that functions as an enclave in the country's economy is not likely to bring economic growth and poverty reduction. The Government is aware of this fact and seeks to leverage the gas discoveries to increase employment and earnings for Tanzanians through local content policy. However, the policy does not directly address the agricultural sector, where the majority of the labour force is engaged. Currently, most farmers do not use improved technology or adopt the good agricultural practices required to attract demand from the extractive sector. To develop the potential of the agricultural sector to participate in the extractive sector, measures to train farmers in adopting good agricultural practices are needed.

Introduction

Around 88% of the poor in Tanzania live in rural areas (Osorio et al., 2014) and two-thirds of the labour force is currently engaged in agriculture (NBS, 2015). Hence, more broad-based growth from the extractive sector may be achieved if linkages are established with the agricultural sector. Natural gas extraction may open up new market opportunities for farmers to supply food items for high-value food buyers such as caterers, restaurants, supermarkets and processors. However, farmers are unlikely to benefit significantly from new market opportunities because of existing household, infrastructural and institutional constraints (Kinyondo & Magashi, 2017).

Generally, farmers lack the managerial and technical skills necessary to plan, produce and market for high-end buyers. Currently, most farmers in Tanzania produce primarily for their own consumption, and they are not likely to benefit from increased high-value food demand without improved market integration. Integrating into regional markets—particularly supplying directly or as closely as possible to high-end buyers of foods—would be very beneficial to farmers. To assess whether a gap exists in the farmers' capacity and their market participation a survey of 1,500 farm households in Lindi and Mtwara regions was conducted in 2016. This chapter summarizes results and discusses the opportunities for and challenges of integrating farmers into high-end food markets.

Benefits and challenges of linking agriculture with the extractive sector

There are many benefits of linking farmers with high-end markets (Bezu et al., 2018). First, farmers can receive higher regional prices by eliminating some of the trader and wholesaler margins. Second, they can produce and sell profitable new crops or vegetables which have high returns but currently no local demand. For example, workers in extractive industries and urban consumers may want certain types of vegetables which can be cheaply produced by farmers, but are not currently produced because they are not consumed by people in rural areas. Third, farmers may receive a price premium for producing high-quality items for which there may not be a reward in the village market. Finally, farmers may reduce market risk through contract farming for high-end buyers. There have been several cases, including in southern Tanzania, where new and improved technologies have resulted in higher productivity and output, but where farmers were unable to financially benefit from high-value production because of a sharp decline in prices associated with sharp increase in supply. A contract farming deal to supply high-value food buyers in regional or urban markets can work to reduce this risk.

Illustration: Vecteezy

However, there are several challenges to realizing these advantages. First, many smallholder farmers are constrained by lack of physical and financial assets and do not have the resources to produce sufficiently large quantities to supply regional or urban markets. Second, farmers may lack the managerial and technical skills to meet the stringent quality requirements from high-value food buyers. Third, lack of access to communication and information as well as the poor rural road infrastructure often isolate local markets and local farmers from urban buyers. Finally, since factor markets are not well developed in rural areas, key inputs, such as seed, may not be available at the required quantity, quality and consistency.

These challenges are not insurmountable but the market is unlikely to resolve them automatically in the short to medium term. To enable farmers to produce and sell high-value food products, concerted efforts are needed to address these constraints, either directly through reform and support initiatives, or indirectly by influencing market incentives.

Can agriculture sector development become a form of local content?

The Tanzanian government has developed local content policies in order to use the newly discovered natural gas resources to create jobs for Tanzanians and to stimulate local business development, including small and medium enterprises (Kinyondo & Villanger, 2017). In addition to the government's efforts, several donors are developing new skills-enhancing programmes and related interventions in order to support these goals.

Typically, promoting local content focuses on improving skills in the petroleum sector, and only a few initiatives are trying to link local content with agriculture sector development. One such intervention is the Aga Khan Foundation's project *"Food Value Chain (FVC) Development for Gas and Mining Industry in Southern Tanzania."* This project, which is funded under the Skills for Oil and Gas in Africa (SOGA) programme, aims to reduce the skills gaps in the petroleum and associated sectors in East Africa.

The project targets three types of food items—namely, vegetables, poultry and pulses—that are projected to be in high demand from the extractive sector. These products are already demanded by high-end buyers, such as restaurants, hotels, regional markets and exporters, but are not being supplied by local producers at the required quantity and quality. The project involves several complementary activities that seek to remove the constraints farmers face and develop farmers' capacity to produce and supply high-value food crops. These interventions include:

1. Facilitating the establishment of producer groups, and providing training, mentorship and market linkage to the members and leaders of the groups.
2. Facilitating and strengthening quality input supply in the project area.
3. Supporting post-harvest investment, such as collection facilities, infrastructure and communal abattoirs.

The intervention areas are selected for their potential to produce these food items.

Study methodology

A baseline survey of 1,500 farm households in Lindi and Mtwara was conducted to assess whether a gap exists in farmers' capacity and market participation for the three food items expected to be in high demand. The data were collected for the 2016 production period before the start of the intervention. Data were captured from 900 beneficiary and 600 comparison farm households across eight districts in Lindi and Mtwara regions so as to evaluate the intervention's impact at completion. Districts were selected for the value chain development project due to their potential to produce pulses, poultry and vegetables. The intervention is still running so the results presented below focus only on the baseline capacity of the smallholder farmers surveyed.

BASELINE FINDINGS

Among the baseline data collected, three findings are highlighted.

1) Smallholder farmers in Lindi and Mtwara are not actively engaged in production and marketing of poultry and vegetables.
At the start of the programme, only 31% of the farmers assessed actually produced any type of poultry product, and an even smaller percentage (19%) produced vegetables. On the other hand, the majority of the farmers (92%) are pulse producers. To link farmers to high-value food buyers, the project will therefore need to first improve the capacity of farmers to produce the other food items in demand.

2) Vegetables yield more in sales revenue than poultry and pulses.
Relatively few farmers produce vegetables. Yet, vegetable producers earn 1.6 times more than pulse producers and 4 times more than poultry producers, suggesting higher potential for vegetables.

3) The majority of farmers do not use improved technology or adopt good agricultural practices.

At present, poultry production is largely restricted to farmers keeping a few chickens at home. The majority of farmers do not vaccinate their chickens or provide feed supplements. Similarly, the majority of vegetable producers do not use improved seed or prepare the land and nursery according to good agricultural practices. The same is true for pulses.

Concluding remarks and policy implications

The extraction and use of Tanzania's natural gas resources is moving at a slower pace than expected a few years ago when the discoveries were made. Yet, the country might become a leading producer and exporter of natural gas in East Africa in the coming decade. This has created high expectations for socio-economic development and poverty reduction.

Although the Government actively seeks to leverage this discovery to increase employment and earnings for Tanzanians by expanding local content, the policy does not directly address the agricultural sector, where the majority of the labour force is engaged. Of the three products that were identified as potentially attracting high demand from the extractives sector, the current study found that most farmers surveyed grew pulses but far fewer raised poultry or produced vegetables. Many farmers, particularly poultry and vegetable producers, also require training to adopt good agricultural practices.

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PART IV:
The politics of petroleum policies in Tanzania

Photo: Brett Jordan/Unsplash

The successful management of national petroleum wealth goes beyond a well-functioning public financial management system. Indeed, a booming petroleum sector poses governance challenges at all levels of government, in the accountability relations between the government and citizens, and for peaceful co-existence among different groups in society.

In Tanzania, various interest groups from business and government have been positioning themselves to shape the tax legislation and regulatory frameworks applicable to the petroleum sector in Tanzania. Therefore, a question of great importance for future policy dialogue is how the policy process and institutional set-up for petroleum governance can be optimized for regulating interest groups and for managing public expectations. There has been much talk about raised public expectations on the future benefits of the gas sector, but little empirical knowledge of what those expectations are and whether they differ between socio-economic groups.

To start the discussion of the politics of petroleum, Chapter 15 investigates the role of lobbyists in shaping Tanzania's petroleum policies, and Chapters 16 and 17 examine the role of civil society in petroleum governance in Tanzania. The final two papers summarize two survey experiments on the perceptions and expectations of citizens related to the country's emerging natural gas sector. Chapter 18 tests whether access to information changes individual expectations with respect to corruption and trust in government, and Chapter 19 investigates a commonly held assumption about the relationship between violent conflict and people's expectations about revenues and benefits from the sector. The results indicate that ordinary citizens and politicians in Tanzania have limited knowledge about the petroleum sector, and public expectations are shaped primarily by the media. Hence, people's perceptions of governance may matter more than actual government performance.

15. Shaping petroleum policies in Tanzania: The role of lobbyists

Odd-Helge Fjeldstad and Jesper Johnsøn

Resource discoveries often result in expectations of rapid growth, but also major concerns for increasing corruption. The resource curse literature puts strong emphasis on the need to build capable and robust institutions in anticipation of resource windfalls; an emphasis that has received much policy attention among Africa's new oil producers, such as Chad and Ghana. In the context of Tanzania's offshore gas field discoveries, this chapter demonstrates that uncoordinated public policy and a lack of regulation on lobbyism are important challenges for petroleum governance. Existing literature on the resource curse has so far not examined how policy coordination and lobbyism matter for petroleum governance. Based on the analysis, this study argues that existing models for analyzing the behaviour of interest groups need modifications to explain how lobbyism works in a resource-rich country like Tanzania.

Introduction

Research consistently shows that the likelihood of experiencing a resource curse is correlated with the quality of a country's institutions (Mehlum et al., 2006; Humphreys et al., 2007; Acemoglu & Robinson, 2012). However, there is no clear understanding of what institutions, policies or regulations have the potential to effectively manage natural resources and under what conditions (Ross, 2015). This chapter analyzes the role of governance institutions that set the rules of the political game. This includes the capacity of the government to effectively formulate and implement sound policies. In this perspective, it is important to understand how the power and behaviour of various interest groups affect the rules of the game by shaping the policies and governance of natural gas extraction.

Studies of petroleum governance commonly focus on contractual issues such as the negotiation of exploration licences and production-sharing agreements (Bridge & Le Billon, 2013; Manley & Lassourd, 2014). This case study takes a different focus and examines policies that set the parameters for such contracts. It follows the processes around the development of the petroleum legislation in Tanzania in 2015 to analyze how the petroleum policy was coordinated and how interest groups sought to influence outcomes by lobbying.

Defining lobbyism

There is no universal definition of lobbyism. Godwin et al. (2013) define lobbying in the US as *'campaign contributions and the various activities of paid lobbyists as well as by citizens and public officials to influence policy outcomes'*. This definition may make sense in a well-regulated policy environment. In a developing country like Tanzania, a broader definition is required because interest groups are differently organized and the governance system is more informal, as explained in more detail below. Thus, for the purposes of this study, lobbyism is defined as '*any effort used to influence public policy*' as per Baumgartner and Leech (1998).

Many developing countries do not have legislation that directly addresses the appropriate behaviour and role of interest groups in the process of public policymaking. This is also the case for Tanzania, where there are no laws or regulations that establish the rules of the lobbyists' game.

Petroleum legislation and the influence of interest groups

The *Petroleum Act* (URT, 2015a), the *Oil and Gas Revenue Management Act* (URT, 2015b), and the *Tanzania Extractive Industries (Transparency and Accountability) Act* (URT, 2015c) were enacted by the Tanzanian Parliament in July 2015 as a response to the discovery of large quantities of natural gas (see Chapter 3 for details on the legislative framework for the petroleum sector in Tanzania). These three laws were passed within a week under a 'certificate of urgency', allowing only cursory examination by the Parliamentary Committee for Energy and Minerals (Pedersen & Bofin, 2015, p. 20). Under a 'certificate of urgency' clause, the Parliament is allowed to make rapid decisions on enactment with a minimum of consultations if the situation so dictates. It is generally considered a controversial way of enacting *'even according to Tanzanian standards'* (Musiime, 2015). Opposition parties and civil society groups protested and called unsuccessfully for public hearings.

The Tanzanian Civil Society Coalition expressed concern at the tabling of the bills under the 'certificate of urgency', arguing that it hindered inclusive, open and informed participation of citizens, industry stakeholders and legislators. According to Kinyondo & Villanger (2017), the Government invited the international oil companies to provide comments and responses to the draft Petroleum Act with a four-day deadline. A senior staff member of one of the companies stated:

> *It is not possible to go through such a comprehensive legal document within two to four days even if you have the best lawyers. We would have needed at least two months. It is a very important document that requires much more time for considerations, and this was not an adequate approach and timeline for such consultations. (ibid., p. 382).*

In the years before the new petroleum acts were formulated and passed by the Parliament, several policy documents and studies argued for the importance of consultations with key stakeholders. For instance, a study commissioned by the British High Commission in support of an initiative of the TPDC to formulate a local content policy in the petroleum sector, recommended extensive consultations with stakeholders (Warner, 2012). This recommendation is mirrored in the initial

draft of the *Local Content Policy of Tanzania for Oil and Gas Industry 2014* which states that "a coordination mechanism will be established to allow for multi-stakeholder consultations involving key stakeholders, including key ministries, local government authorities, the private sector, universities, civil society organizations, the media and development partners" (URT, 2014, Section 5.3.1, p. 34). In spite of these intentions, the Tanzanian Government did not establish platforms for proper and transparent consultations.

Two categories of interest groups have clearly put their mark on the new acts. First, the international Extractive Industry Transparency Initiative (EITI) gains a permanent legal basis for its operations in Tanzania in the *Extractive Industries (Transparency and Accountability) Act* (URT, 2015c), which establishes a Tanzania Extractives (Transparency and Accountability) Committee. Second, the national business community will benefit from the strong local content requirements, as stated in Part VIII of the *Petroleum Act* (URT, 2015a). The Tanzania Private Sector Foundation (TPSF), an umbrella organization for business associations, ran an intense lobbying campaign to promote local business interests. Then chaired by the late Dr Reginald Mengi, a wealthy media mogul with business interests in many sectors, TPSF was an influential player. Through his media concern, IPP Media, Dr Mengi also actively lobbied for local business participation in the oil and gas sector. The new legislation provides no preferential treatment to national actors in the upstream business, but its "far-reaching local content requirements will offer plenty of opportunities for local business interests" (Pedersen & Bofin, 2015, p. 22). A brief overview of local content in the petroleum legislation in Tanzania is provided in Box 15.1.

BOX 15.1
Local content in the petroleum legislation

The *Petroleum Act 2015* (URT, 2015a), states that the National Oil Company (TPDC), shall have exclusive rights over natural gas midstream and downstream in the value chain, and 'promote local content including participation of Tanzanians in the natural gas value chain' (para 10). Further, the new Petroleum Upstream Regulatory Authority (PURA) shall 'promote local content including participation of Tanzanians in the natural gas value chain (URT 2015a, para 13). EWURA (the Energy and Water Utilities Regulatory Authority, the regulator of midstream and downstream activities, shall 'promote the maximum participation of Tanzanians in every part of the petroleum value chain' (URT 2015a, para 31). Local content has also become a new element in EITI reporting. The *Tanzania Extractive Industries (Transparency and Accountability) Act, 2015* (URT 2015c, para 15) states that an 'extractive industry company shall submit to the Committee annual reports containing information on local content and corporate social responsibility'.

Civil society groups not connected to EITI or to the business community felt sidelined. They did not make any significant contribution to policy formulation in the petroleum sector, and have been mostly reactive, responding to government policy statements and actions. This reactive approach is reflected in a call from the Tanganyika Law Society in November 2015 for the Government to amend the oil and gas legislations passed by Parliament "to enhance transparency and accountability in the extractive industries" (James & Mtulya, 2015).

Surprisingly, IOCs did not seem to have made any substantial efforts to influence the legislative process, and the new acts do not appear to cater for them. One interpretation is that these companies know that open lobbyism at the policy level could backfire by airing conflicting interests with the domestic business sector about local content policies. The massive, negative attention that international mining companies have faced for being exploitative from politicians, local business people, civil society actors and the media in recent years, has tarnished their image both in Tanzania and abroad (see Chapter 12). The experiences from the mining sector might have affected the petroleum companies' choice of a low-profile, non-conflictual approach.

Surprisingly, IOCs did not seem to have made any substantial efforts to influence the legislative process, and the new acts do not appear to cater for them.

Meetings with petroleum companies in Dar es Salaam in October and November 2015 confirmed that they did not want to be involved in political issues. Hence, their preferred strategy may have been to wait and influence the interpretation and implementation of the gas policy through the Tanzanian bureaucracy. The international companies possess technical know-how that the Tanzanian public administration cannot match. Thus, a rational strategy for the foreign companies would be to lobby on other arenas where their technical know-how could be applied.

The policy environment and the 'rules' of the lobby game

The behaviour of interest groups described above does not conform with the stereotypical assumptions that lobbyism is done mainly by large corporations. An analysis of Tanzania's policy-making system is useful to explain this behaviour. Interviews with senior officials in TPDC, the Ministry of Energy and Minerals (MEM) and the Tanzania Revenue Authority (TRA) found that the officials were cautious in taking policy advice from international organizations, in particular from the World Bank. In their view, the World Bank's advice on extractives had not benefitted Tanzania in the past. The mining sector was referred to as an example where international organizations and multinational companies had 'pressured' the Government into entering unfavourable agreements. This time, with the petroleum sector, they were determined not to repeat previous mistakes and to resist such lobbying efforts. However, they welcomed the technical expertise that the donors and multinational companies offered due to inadequate financial, human and technological resources in the country (URT, 2014). Yet, the Government did not seem to critically reflect on the risk that technical expertise could be used to influence the interpretation and implementation of policies.

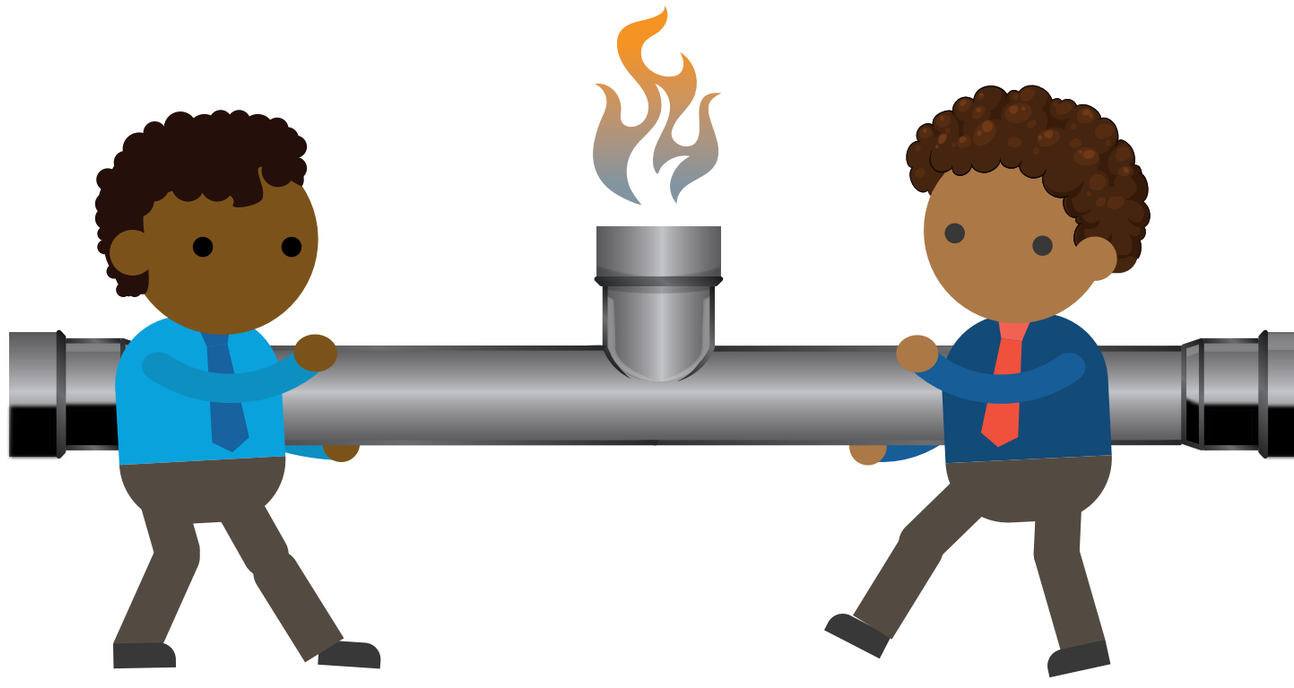
Stakeholder interviews also revealed a chaotic policy environment, where no agency or ministry was given the clear leading role, which meant that they all sought to influence the new legislation to bolster their own organizations (see Chapter 10 on the diversity of agencies involved in regulating local content in Tanzania's mining and gas sectors). The Chief Secretary in the President's Office played a coordinating role, thus keeping the President close to the process, but did not steer the process in a systematic manner. Pedersen & Bofin (2015, p. 20) note the 'not very stable policy environment' in Tanzania, and describe a case where the TRA called for firms to express their interest in carrying out renegotiation of petroleum contracts, without coordinating this initiative with the MEM. The Ministry challenged the TRA, telling investors that there would be no renegotiations. This policy process stands in contrast to rational choice-oriented conceptions of decision-making processes that operate on the assumption of well-planned policy processes with clear strategic goals and often selflessly implementing bureaucrats.

Outsiders may find it difficult to navigate in such an environment, referred to as an "organized anarchy" by Cohen et al. (1972). But insiders will benefit. As noted above, the Tanzania Private Sector Foundation ran an intense lobbying campaign to promote local business interests. The local content requirements in the new legislation will offer plenty of opportunities for local business interests. The Government's uncoordinated policy positions and Tanzania's absence of regulations on lobbyism were useful for strong local businesspeople to shape the governance and policies of natural gas extraction.

Regulating lobbyism and promoting policy coordination

What are the broader implications of Tanzania's experience for understanding lobbyism and policy coordination in resource-rich developing countries? First, existing literature on lobbyism suggests that the level of policy coordination matters for the behaviour of lobbyists (Baumgartner et al., 2009). This literature is mainly based on empirical material from the United States and Europe. There are few rigorous case studies from resource-rich developing countries on policy coordination and lobbying, and none that directly assesses the links between them.

Second, scholars disagree over the extent to which organized interests help or harm the democratic process and the degree to which inequalities in the resources of competing interests bias the policy process depending on their theoretical outlook. One position argues that almost all interests can influence political decision-makers either directly through lobbying or indirectly via political parties and elections. The tug-of-war between competing organized interest groups does not generally lead to a democratic problem or poor decisions, as politicians care about re-election (Baumgartner et al., 2009). Thus, one would expect that Tanzania's citizens would be heard either directly through an association or indirectly through their elected representatives. The other position emphasizes that many interests are not heard because they are not organized or have few resources. Large groups of consumers may miss out to small groups of organized interests. This is considered a democratic problem. One concern is that the citizens of Tanzania will not mobilize a unified voice to counter organized interest groups (such as national or international companies) when major new legislative initiatives are discussed.



A better understanding of how lobbyism is conducted in developing countries could also improve our understanding of corruption patterns. Harstad & Svensson (2011) argue that the lower probability of being sanctioned for a corrupt act in what they call poor countries, means that bribery is the preferred way to influence policy decisions, whereas lobbyism is more common in rich countries. The study presented in this chapter suggests that lobbyism in developing countries may be much more important than previously assumed in both the academic and policy-oriented literature. This does not mean that bribery does not happen, or that it cannot be a complementary strategy to lobbyism. However, it is too simplistic to expect that businesses will prefer to bribe rather than lobby if both strategies can achieve the same goal. Policy capture is of course just one type of non-monetary corruption that neither receives much scholarly attention nor is currently well-regulated in most African countries. Other, often related, forms of non-monetary corruption are nepotism, conflicts of interest and revolving doors.

Concluding remarks and policy implications

The resource curse is not just an economic phenomenon, but one that is directly or indirectly affected by a country's politics and governance structures. Uncoordinated policy can lead to conflicting agendas and policy stalemates, in addition to mistrust and competition between regulatory authorities. Unregulated lobbyism may

lead to regulatory capture by interest groups, biased policy decisions, or outright corruption. There is a need for more studies of policy coordination and lobbyism in developing countries to better understand how resource governance is affected, based on analytical frameworks that reflect the political environment and governance structures of developing countries and the way the lobby game plays out in such contexts.

The current analysis shows that uncoordinated policy and unregulated lobbyism are important governance challenges for Tanzania's emerging natural gas sector, and that these challenges are interlinked. The inability to reach a unified, coordinated policy position has led to bureaucratic competition, policy stalemate, and potential regulatory capture by lobby groups. If reform initiatives are to succeed in addressing the negative effects of unregulated lobbyism and weak policy coordination, a better understanding is required of how the rules of the 'lobby game' are affected by political economy factors, in particular, how uneven power relations between various interest groups are shaping the policies of natural gas extraction.

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16. Civil society's role in petroleum governance: The case of Tanzania

Kendra Dupuy, Lise Rakner and Lucas Katera

Civil society is a key actor in ensuring good natural resource governance. Civil society organizations (CSOs) provide information, have moral legitimacy to set the resource governance agenda, can help to democratize power in resource management, and can work to keep other resource governance actors like the government and companies accountable. Donors can support these critical functions of CSOs in the Tanzanian context by continuing to provide financial and political support to CSOs, and by involving them in debates and policy making. It is vital that donors continue to emphasize to the Government of Tanzania the importance of civil society involvement in governing the country's petroleum sector.

Civil society's role in natural resource management

How can countries rich in high-value, non-renewable natural resources like oil, gas and minerals overcome the resource curse and translate their resource wealth into economic development and societal gains? This question has preoccupied academics and policy makers for decades, with scholars generally concluding that good governance is required to ensure that positive outcomes result from natural resource wealth. Natural resource governance "refers to the norms, institutions and processes that determine how power and responsibilities over natural resources are exercised, how decisions are taken, and how citizens…participate in and benefit from the management of natural resources" (IUCN, 2019). Key actors involved in natural resource governance include civil society organizations (CSOs), companies, governments and citizens. These actors make decisions about, set rules for, and distribute benefits from, natural resource endowments.

This chapter focuses on civil society's role in the governance of petroleum resources. "Civil society" is a broad concept, and the term "civil society organization" covers many types of institutions, such as informal/grassroots groups, formal non-governmental organizations, labour organizations and professional groups (Edwards, 2011). For the purposes of this study, civil society is defined as the realm outside of state, market and family that involves "citizens acting collectively in the public sphere to express their interests, passions, preferences, and ideas to exchange information, to achieve collective goals, to make demands on the state, to improve the structure and functioning of the state, and to hold state officials accountable" (Diamond, 1999, p. 221). South Africa's 2017 national report for the Human Rights Council's Universal Periodic Review (UPR) defines civil society as that which "operat[es] outside of the State and independent of the market, [and]… is often referred to as the third sector. CSOs are varied in their character and in their purpose. However, there is a common thread that holds them together, which is that they exist in public life to *promote public good*" (p. 17; emphasis added).

Civil society organizations play four different roles in natural resource governance that can help to ensure that resource production and extraction results in democratic government, economic development and social peace – the exact opposite of the resource curse (Furstenberg, 2015; Aaronson, 2011; Bieri, 2010; Ross, 2015). These are: 1) an expertise role; 2) an agenda-setting role; 3) a representative role; and 4) a monitoring role. Each of these roles has specific effects on resource governance.

First, civil society has an *expertise role* in creating, disseminating and using information. This role creates an *information effect* in resource governance: CSOs' expertise stems from their ability to collect and disseminate information. Information provision can support a feedback loop between government and the governed. In this way, CSOs can empower citizens to hold their government to account for the use of resources and the benefits of their extraction. Citizen demands for government accountability in resource use can put pressure on public officials to ensure that resources are managed for the collective good, resulting in improved public goods and service provision as well as equitable economic growth. Information provision also allows civil society to use naming and shaming tactics to convince public and private actors to change socially costly behaviours, such as environmental degradation or financial mismanagement.

Second, civil society has an *agenda-setting role*, which can have a *moral effect* on resource governance. Organizations' moral authority, grassroots representation, and pursuit of the public benefit gives them the legitimacy to set international and national agendas in terms of which issues matter in resource governance. This legitimacy allows CSOs to draw attention to previously neglected problems, such as resource-related human rights violations and concerns for the environment.

Third, civil society has a *representative role* and thus a *democratization effect* in resource governance. CSOs' involvement in resource governance can broaden authority over resource use and decisions about the distribution of costs and benefits from extraction and production. Civil society can empower previously marginalized actors to have their voice heard and to take part in decision-making about resource access and use. In turn, this can potentially reduce the grievances and protests of less privileged social groups, which run the risk of turning violent. Broader participation in resource management also reduces the monopoly power and discretionary authority that enable corruption in resource sectors.

Fourth, civil society has a *monitoring role* that can have an *accountability effect* in resource governance. As watchdogs, organizations monitor and influence public

and private actors' adherence to the accepted rules of fair resource extraction and production. CSOs can pressure these actors to comply with formal laws and internationally accepted standards of fair behaviour. CSOs can watch the behaviour of individuals and organizations involved in resource management, and use information channels to expose and stop corrupt and other negative behaviours.

Mapping the national-level civil society landscape in Tanzania's petroleum sector

The activities and focus of many types of CSOs are relevant to the petroleum sector, including sector-specific, advocacy, human rights, environment, poverty and development, women's rights and legal groups, just to name a few. In Tanzania, there also exists a small group of sector-focused CSOs. In June 2017, sector-specific organizations which primarily work on extractive sector governance issues at the national level were mapped using internet media and document searches. The groups identified have specific mandates to work on petroleum sector issues, and/or implement programmes and activities on petroleum governance. Table 16.1 lists the more prominent organizations.

TABLE 16.1
List of prominent CSOs working on petroleum governance in Tanzania

Organization	Function, focus, and activities
Haki Rasilimali	Umbrella organization engaged in advocacy in the extractive industries through coordination of organizations and influencing policy
Oil and Natural Gas Environmental Alliance (ONGEA)	Network of CSOs advocating for transparency, accountability, local participation and environmental management in the petroleum sector
Policy Forum	Network of CSOs working together to influence policy and hold government to account, including in the petroleum sector
Governance Links	CSO focusing on sustainable natural resource governance
Interfaith Standing Committee on Economic Justice and the Integrity of Creation	Faith-based committee advocating for social and economic justice, including in the petroleum sector
Natural Resource Governance Institute	International CSO providing policy advice, analysis and advocacy in the extractive industries
Oxfam Tanzania	Advocate for contract transparency, environmental safeguards and fair distribution of natural gas revenues

CSO representation in the petroleum sector is formally institutionalized through the Tanzania Extractive Industries Transparency Initiative (TEITI) and in other pieces of legislation. First, five of the TEITI multi-stakeholder working group members are CSOs, with these members coming from trade unions, advocacy organizations, faith-based groups, and CSOs working specifically on issues regarding oil, gas and mining. Second, the 2013 *Natural Gas Policy* recognizes the advocacy, mobilization and dialogue role of civil society and their contribution to designing, monitoring and implementing socio-economic programmes in the sector and for monitoring and evaluating sector performance.

Civil society roles in Tanzania's petroleum governance

For this study, representatives of ten CSO and donor agencies were interviewed as well as other experts in Dar es Salaam to gain a better understanding of the various roles that civil society is playing in petroleum governance in Tanzania. Documents were collected for the mapping exercise both during and after in-country data collection.

To start, all interviewees were asked to provide a definition for "good petroleum governance". There was general agreement that this term covers the whole process from exploration to extraction and production, and clearly outlines who is responsible and accountable for decisions throughout the whole extraction cycle. Interviewees agreed that transparency and sustainability are key pillars of good petroleum governance. In a well-governed petroleum sector, decisions are well-informed, logical and executed in a timely manner, and there is clear leadership. Outcomes matter, too; good petroleum governance means that the resources extracted are used for development.

The interviewees confirmed that CSOs working on petroleum governance in Tanzania play the four roles described at the beginning of this chapter. A bilateral donor agency representative stated that the most important roles of CSOs in petroleum governance are to generate information, engage in advocacy and to speak up on issues. One CSO representative discussed the consultative role that CSOs play, in that national government representatives consult with CSOs on issues related to the petroleum sector. In addition to generating information and raising issues that warrant attention, CSOs are also providing analysis, engaging in dialogue with government, providing feedback on proposed legislation, helping with policy making and organizing communities.

A recent publication by the Natural Resource Governance Institute (NRGI) highlights how that group's training and capacity building efforts have helped to coordinate CSOs in petroleum governance, strengthen their involvement in the drafting of legislation, and build the knowledge and skills of all sector stakeholders, including government, media and the private sector (NRGI, 2018). Evidence of civil society's role in drafting legislation for the petroleum sector can be found in Policy Forum's 2015-16 *Tanzania Governance Review* report, which describes how civil society issued critical commentaries on three proposed bills. Finally, member organizations of the Oil and Natural Gas Environmental Alliance and Haki Rasilimali have also worked to enhance knowledge and understanding within local communities affected by the petroleum sector.

Current challenges facing Tanzanian CSOs in their work on petroleum governance

CSOs are currently facing several challenges in their work within Tanzania's petroleum sector. A key development has been the negative shift in the enabling environment for civil society to operate in the country. All of the interviewees discussed the ongoing restrictions on civil and political liberties and the shrinking space for civil society in the country. This development is in part related to a

resurgence of resource nationalism in the government, particularly regarding the country's extractive industries. As a result, CSOs are less able to voice critical views of government, including about the management of the petroleum sector. Several interviewees noted that CSOs already face capacity challenges in the form of access to limited sources of funding and to current knowledge and skills to engage with the sector. These challenges combined with the perceived decline in the space for freedom of speech and association present serious obstacles to the ability of CSOs to meaningfully engage in petroleum governance. Meaningful engagement is made even more difficult when government consultation of CSOs appears to have diminished. While the government may consult the views and expertise of CSOs in formulating legislation and policy for the petroleum sector, the CSO representatives interviewed did not feel that these consultations were meaningful.

CSOs feel that they are tasked with expectation management in local communities, which they try to fulfil through community training and awareness-raising.

A second challenge is that CSOs working on petroleum sector governance must work to manage very high expectations among local communities in gas-extracting areas. CSO representatives pointed out that high expectations have already led to riots and other negative actions in areas where reserves have been discovered. CSOs feel that they are largely tasked with expectation management in local communities, which they try to fulfil through community training and awareness-raising. This requires ongoing, continuous effort and bottom-up, collaborative ways of working, which can be at odds with the government and donor priorities and even their ways of working.

Concluding remarks and policy implications

Civil society organizations play important roles in petroleum governance. What can the government and development partners do to ensure that CSOs are able to continue to carry out their roles in the sector? First, it is in the interest of the Government to engage and support CSOs as an effective strategy for broadening citizen participation and information sharing, by setting clear and simplified rules governing CSOs. A well-coordinated space for CSO participation is likely to support the Government in managing public expectations. Second, development partners should continue to provide financial and political support to CSOs to ensure their sustained activities. Third, development partners should continue to engage in dialogue with the Government to emphasize the importance of citizen participation and CSO involvement in governing the petroleum sector. Finally, development partners should continue to provide space for CSOs' participation in sector-relevant debates and events, and use CSOs' expertise in policy dialogue and reporting.

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17. Making sense of CSOs (in)action in Tanzania's petroleum sector: Where is gender?

Victoria Wyndham and Siri Lange

Tanzania has a vibrant civil society. Consequently, one would expect civil society organizations (CSOs) to take an active part in shaping the early phases of the country's petroleum sector. This chapter examines the role that national CSOs play in the country's petroleum sector, with a specific focus on gender. While the incorporation of gender perspectives is central to the work of many Tanzanian CSOs, they appear to be far less prominent in petroleum governance. Consequently, this risks that women, who in some settings represent a marginalized group, are not taken into account in social investment efforts. Based on interviews with six CSOs, the study found limited evidence that national level CSOs are focusing on gender issues in the petroleum sector.

Introduction

Since the late 1990s, CSOs in Tanzania have played an active role in society. In the field of natural resources, some CSOs have advocated for mining companies to meet their social responsibilities and obligations to the communities that host them, and to pay taxes to the state (Curtis & Lissu, 2008; Curtis with Ngowi, 2017). When it comes to the petroleum sector, the level of engagement by national CSOs is considerably less visible (see Chapter 16 on civil society's role in petroleum governance), and the degree to which they are considering the role of gender within projects and social investments implemented by petroleum companies is limited.

This lack of engagement on the intersection between the social investments of petroleum companies and gender from the Tanzanian CSO sector warranted further investigation. The topic is particularly relevant given the discovery of large natural gas reserves. Why are national CSOs less active in this sector? And why are gender-focused CSOs not conducting oversight on social investments?

Host communities are vulnerable when extraction of natural resources is taking place in their neighbourhood, but they can also benefit from such investments (ANRC, 2015). When it comes to the social development projects that that petroleum companies carry out, CSOs could assess if the communities' best interests are being served by the type of projects being implemented, and if they follow the tenets of gender mainstreaming.

Gender mainstreaming is a concept that is concerned with the analysis of implications for women and men (and girls and boys) of any policy or action (Caglar, 2013). Considering how gender is factored into a given project is an essential step in determining if the project meets the needs of the community and is relevant for gender equality and equity (Lange & Tjomsland, 2014). By examining the projects that a company implements in its host community, CSOs can determine how and if gender is mainstreamed. It is not enough that companies say gender is important, it should be evident in their projects, from conception through to implementation and evaluation.

Explaining the limited engagement by CSOs

The interviews with civil society organizations in Tanzania identified a number of factors that determine why national CSOs may not appear to be as engaged in the petroleum sector as one would expect in a country with an active civil society sector (see Chapter 16). The organizations that were interviewed are national level CSOs, but most have connections or collaborations in some capacity with local civil society organizations in the gas-producing regions of Lindi and Mtwara.

The following factors were identified that may explain the limited engagement of national CSOs in the petroleum sector in Tanzania:

- A perceived shrinking space for CSOs to engage
- Limited collaboration among and between CSOs
- Gender perspectives are not seen as a central issue in the extractive industries
- Competing priorities
- CSO activities are closely tied to project based funding
- Scepticism about receiving funding from petroleum companies due to the reputational risk.

Whilst CSOs in Tanzania have been recognized for their activism, the perception that the space in which CSOs are permitted to operate is shrinking may account for the seeming inaction of CSOs in relation to the petroleum sector (Must, 2018; Thobias & Kseniia, 2017). But if CSOs do want to venture into the petroleum sector, what should be their first step? Collaborations and partnerships between CSO organizations are increasingly the preferred method of large donor organizations in their funding strategies. One respondent pointed out that the difficulty in such an approach is for CSOs to be able to maintain their organization's own mission and vision:

> ***"My biggest worry is this: How do you maintain your own mission and vision whilst being urged to collaborate with other organizations which might not be doing the same thing as yourself?"***

There may also be a tendency of 'protectionism', where CSOs prefer to secure funding for themselves. This makes a partnership less likely to succeed and may explain the relatively low level of collaboration among CSOs when it comes to engaging with the petroleum sector. Several of the interviewees pointed out that, at the moment, gender perspectives are not seen as a central issue when it comes to the extractive industries:

> ***"Gender specifics in extractives is still very new … people don't talk about gender, they talk about how much gas there is and how many people will be employed."***

The perception here is that gender dynamics are of a lesser concern than people's immediate interest of seeing tangible benefits from the resource. Gender is often regarded as a separate issue, but advocates of gender mainstreaming suggest it is intrinsic to and not separate from development issues (Caglar, 2013). To receive the benefits of a resource, or ensure its equitable distribution, requires that gender perspectives are investigated and represented, so that vulnerable groups are taken into consideration. For example, employment should be a central area to consider when planning and measuring gender inclusiveness.

As mentioned earlier, another factor that may explain the inaction of national CSOs relates to competing priorities. The international oil companies (IOCs) have not yet decided whether to invest in the extraction of Tanzania's offshore gas resources (see Chapter 2). Thus, the social development projects that IOCs have implemented at the local level during the exploration phase are so far relatively small. Should the companies decide to start extracting the gas, however, it is likely that social investments will increase, and more interest from CSOs to scrutinize projects can be expected.

Since funding of CSOs tends to be project-based, organizations may not have the necessary resources to follow the implementation of social development projects by IOCs. It is easier then to prioritize issues that CSOs already have project funding for or to engage with issues that are discussed and debated publicly, like the well-known conflict between Acacia Mining and the Government of Tanzania. Prioritizing the social investments of petroleum companies, given their current size, is comparatively less important. This may be particularly true in cases where prospective funding for projects comes from within the petroleum sector itself. Some organizations consider funding from the petroleum sector to have a reputational risk. One CSO working on gender issues, for example, explained that they had turned down a funding offer from a local beer company because it was not aligned with their values. Another CSO representative argued that petroleum companies use social investments as a public relations (PR) tool first and foremost:

> ***"We don't focus on CSR because it's really for PR. [They donate a] little money, [and get] many clips in newspapers and TV. It's a gap companies take advantage of, something they don't invest significantly in. In civil society, our focus should be on a sub-national distribution of revenues that is fair."***

This suggests that some organizations do not want to be seen as promulgating on behalf of the petroleum companies. But, it can be argued that, precisely because such social investments can be used as a PR tool, they warrant greater scrutiny to ensure host communities' interests and needs are met.

Concluding remarks and policy implications

The factors discussed here are based on interviews with a small number of CSOs and are certainly not exhaustive. However, the findings may be useful for reflecting on some of the factors that might be behind CSOs' limited engagement on the gender dimensions of social investment projects in the petroleum sector in Tanzania. It is important to determine how gender is mainstreamed in the projects that petroleum companies implement to ensure equitable access to project benefits by all of the different groups that constitute the host communities.

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18. Natural resource revenues and corruption: An experimental study of citizens' expectations

Ingrid Hoem Sjursen, Odd-Helge Fjeldstad and Donald Mmari

Corruption is considered to be an important driver of the resource curse in developing countries. This chapter provides evidence on how information about future natural resource revenues shape expectations about corruption and the willingness to engage in corrupt behaviour. In a large-scale field experiment, citizen participants were randomly assigned to watch different versions of an informational video; one version provided information about the recent offshore gas discoveries in Tanzania and the estimated revenues they may earn for the country, while the other version provided only general information about Tanzania. The results indicate that the citizens who received information about the discovery of natural gas expected more corruption in the future than citizens who did not receive this information. No difference was found in willingness to engage in corrupt activities, proxied by cheating in a coin flipping task, between the two groups.

Introduction

Countries that are rich in natural resources tend to experience lower growth, be more corrupt, less democratic and more likely to experience violent conflicts compared with countries that have less abundant natural resources (Collier & Hoeffler, 1998; Leite & Weidmann, 2002; Ross, 2015; Vicente, 2010; Ramsay, 2011; Arezki & Brückner, 2011; Brollo et al., 2013; Caselli & Michaels, 2013; Sala-i-Martin & Subramanian, 2013). Hence, understanding whether and how natural resource revenues affect societal development is of major importance to policy makers (see also Chapter 1).

An established hypothesis among scholars is that the presence of large revenue flows from natural resource extraction and production influences the incentives of both politicians and citizens in a way that increases the misallocation of resources in the economy (Kolstad & Wiig, 2009). First, the large amounts of revenue available make it more attractive for politicians to stay in power, and enable them to spend more on activities that increase their chances of re-election, such as vote buying and reduction of non-resource taxes (Robinson et al., 2006; Ross, 2012; Andersen & Aslaksen, 2013). Second, large revenues from the extractive sectors increase the potential benefits for ordinary citizens from engaging in political lobbying and corruption (Mehlum et al., 2006; Busse & Gröning, 2013).

Studying the effect of natural resource revenues on economic and social outcomes and its causal factors is challenging. The most common approach in economics is to use cross-country datasets to compare outcomes in countries with high natural resource revenues with outcomes in countries with lower natural resource revenues. However, countries typically differ on many other dimensions, including institutions, technology and geography, and all of these dimensions may influence a country's outcomes. It is, therefore, hard to identify whether differences in outcomes between countries are due to differences in natural resource revenues or due to the differences in other dimensions. This problem is especially pronounced for dimensions that are difficult to measure and, therefore, cannot be controlled for econometrically. Another problem is reverse causality. If countries with higher natural resource revenues have worse social and economic outcomes, cross-country analysis cannot substantiate whether natural resource revenue has an adverse effect on outcomes, or whether low social and economic development leads countries to have comparatively higher natural resource revenues and to remain reliant on them.

This chapter reports findings from a research project in which a novel approach was taken to study the effect of natural resource revenues on citizens' expectations on corruption.[1] The methodology tests whether expectations about natural resource rents cause citizens to expect an increase in corruption in the future, and, in turn, whether these expectations increase their willingness to engage in corrupt activities.

Methodology

The study took advantage of the context that Tanzania has recently discovered large reserves of offshore natural gas but has not yet commenced extraction of those reserves to generate large revenue flows (see Chapter 3). Given this scenario, a controlled field experiment was implemented in Dar es Salaam (a 'non-gas' region) and Mtwara and Lindi regions (two gas-producing regions). In the experiment, 3,000 respondents were randomly assigned to watch different versions of an informational video and then asked to answer a set of survey questions and take part in a behavioural experiment. Data were collected in July 2015.

Videos

The videos were designed to create exogenous variations in expectations about future gas revenues. One video contained only general information about Tanzania. The other video provided additional information about the recent discoveries of natural gas and the location of the offshore reserves. It also explained that the gas could be extracted and sold, providing an estimate of potential revenues. The idea was that the video with the gas information would increase respondents' expectations about future gas revenues, unlike the video with only general information.

1 A detailed account of the study, including research design and findings, is presented in Cappelen et al., (2018).

Survey question to measure corruption

The study aimed to investigate whether providing information about the gas discoveries, and thus increasing participants' expectations about future gas revenues, affects expectations about future corruption. To capture this, respondents were asked the following main question on corruption after they had seen the informational video:

> *"In the years to come, I expect the extent of corrupt activities to…*

The response options were: 'decrease a lot', 'decrease', 'stay the same', 'increase' and 'increase a lot'.

Behavioural experiment

In addition to the survey measure, the following incentivized measure was used to capture dishonesty, which is a central feature of corruption. The respondents were asked to flip a coin six times (without the enumerator observing the outcomes) and to report the number of tails they flipped. Prior to undertaking this task, participants were informed that for each tail flipped, they would receive a payment of TZS 1000. The average number of tails reported provided a group level measure of dishonesty.

Identifying the effect of expectations about future gas revenues

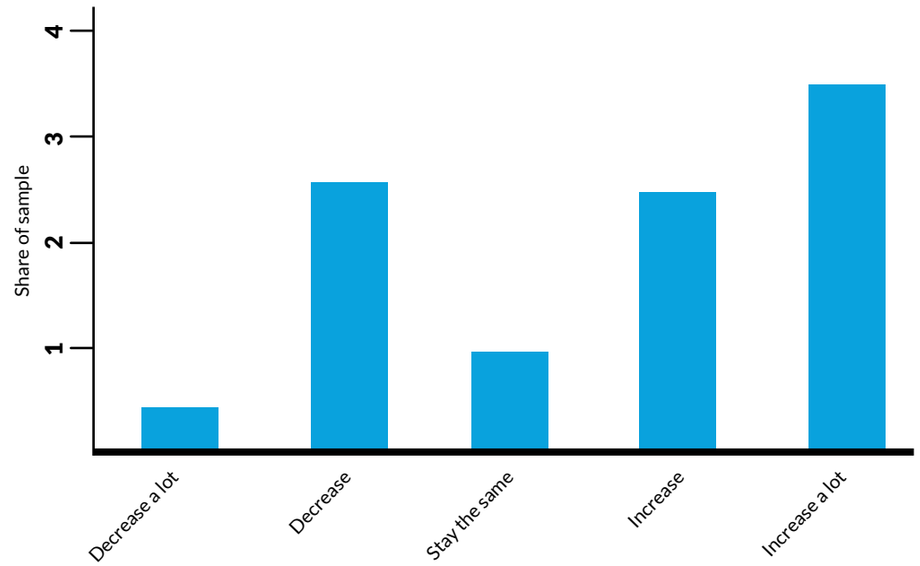
By comparing respondents in the group given information about the gas discoveries and expected revenues and the respondents in the group given no information, the design allowed causal identification of how expectations about natural resource wealth shape people's expectations about corruption and their willingness to engage in corrupt behaviour.

Results

Expected corruption

Figure 18.1 summarizes participants' responses to the question about future corruption. Results show a large variation in perceptions, but the majority of respondents (60%) expect corruption to 'increase' or 'increase a lot' in the years to come. Data further showed that male respondents expected corruption to increase more than female respondents do.

FIGURE 18.1
Distribution of answers to the question "In the years to come, I expect the extent of corrupt activities to..."



Effect of information about gas discoveries on expected corruption

A significant causal effect was found between providing information about natural gas discoveries and respondents' expectations about corruption in the future.

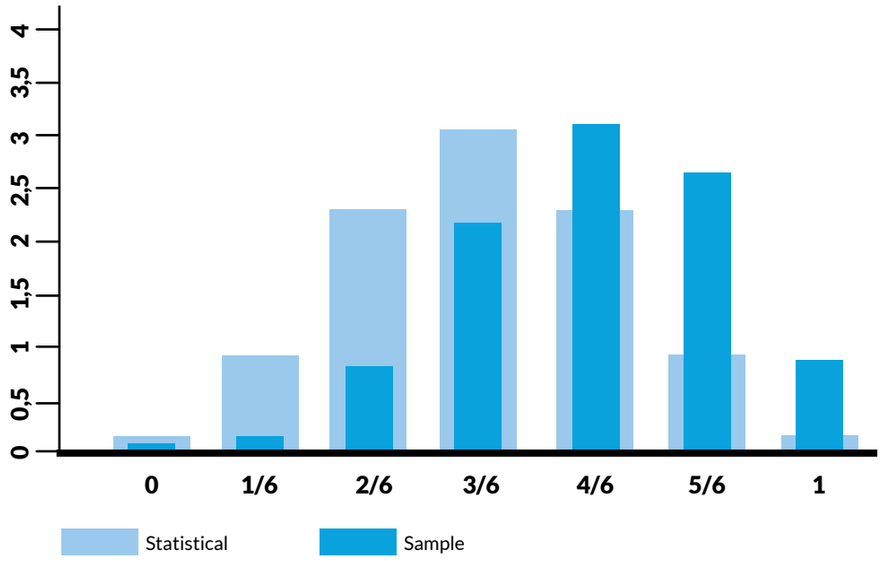
> **Result 1:** Respondents who watched the gas information video to a larger extent answered that they expect the extent of corrupt activities to increase than respondents who watched the "no-gas" information video.

Interestingly, older respondents in Dar es Salaam drove this effect. A possible explanation for this finding is that older respondents were more likely to have experienced the mining boom and the related corruption in Tanzania in the 1990s. The information about new discoveries of natural resources could have reminded these participants about their previous experiences with the mining boom and the high incidence of corruption in the past.

Dishonest behaviour

On average, respondents reported 4 tails from the 6 coin flips, which is one more than statistically expected (3). Figure 18.2 illustrates the distribution of share of tails reported by respondents (dark gray) together with the statistically expected distribution for a sample of completely honest respondents (light gray). It shows that the sample distribution is shifted to the right of the honest benchmark, meaning that respondents are less likely to report 0, 1, 2 and 3, and more likely to report 4, 5 and 6, than expected from a completely honest sample.

FIGURE 18.2
Distribution of statistical and actual distribution of share tails reported



Effect of information about gas discoveries on dishonest behaviour

Surprisingly, no effect was found of providing information about the gas discoveries on the respondents' dishonesty in the behavioural experiment.

> **Result 2:** Respondents who watched the gas information video do not differ in their dishonesty compared to respondents who watched the no-gas information video.

This finding may reflect that the acceptance of and willingness to engage in corrupt activities is related more to the present incidence and experience of corruption in society than to expectations about future corruption related to increased natural resource revenues.

Concluding remarks and policy implications

Understanding how natural resources affect expectations and behaviour is crucial for designing policies that can counteract their adverse effects. In this chapter, the main results from a large-scale field experiment in Tanzania were reported. By randomly allocating respondents to watching different versions of a video, in which the only difference in content was information about natural gas discoveries, the study revealed a causal effect between providing the gas information and expectations of corruption.

The two principal findings from the study were as follows. First, the provision of information about natural gas discoveries significantly increased expectations about future corruption, particularly among older respondents. We interpret this as evidence in support of a potential explanation for adverse effects of natural resources: When natural resource revenues are high, citizens expect more corruption. And when citizens expect more corruption, they may become more willing to engage in corruption themselves, because the social norm against corruption weakens. Thus, having in place institutions that limit the scope of corruption and manage citizen's expectations becomes even more important in the presence of large natural resource revenues.

Second, results from the behavioural experiment (the proxy used for generalized dishonest behaviour) indicate no effect of information about natural gas discoveries on dishonest behaviour. A possible explanation for this finding is that corrupt behaviour is primarily affected by current experiences and incidences of corruption, not expectations about future corruption.

More broadly, the findings suggest that information about government revenue influences citizens' expectations, which, in turn, are likely to shape behaviour. Thus, whether and how the government informs citizens matter to economic and social outcomes. The finding that older respondents who were given information about the gas discoveries were more likely to expect future corruption suggests that different groups in the population may respond differently to new information depending on their historical knowledge and experience.

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19. Natural resources, political discourse and citizen mobilization

Lars Ivar Oppedal Berge, Vincent Somville and Kendra Dupuy

The significant offshore gas discoveries in Tanzania have shaped the country's political discourse in recent years, with politicians promising to turn this newfound resource wealth into rapid economic growth and poverty reduction. Large-scale extraction of the gas has yet to occur, however, raising concerns that creating unrealistic expectations about future economic gain could motivate citizens to participate in violent collective action if these expectations are not met. Riots in the gas-producing Mtwara region in 2012 and 2013 over dissatisfaction with the route of a planned gas pipeline demonstrate that these fears are not unfounded (Must, 2018). However, while this incident should be taken seriously, it is does not necessarily indicate that Tanzanians are willing to take part in future protests or other violent actions against the Government. In this chapter, the results of a survey experiment conducted in Dar es Salaam and the gas-producing regions of Lindi and Mtwara in October 2016 are presented. The evidence shows that petroleum-related expectations are not very likely to inspire large-scale participation in violence.

Unmet expectations and civil unrest

The extensive literature on the connection between resource wealth and violence generally concludes that high-value resources like oil, natural gas, and minerals and metals can fuel and sustain violent, armed conflict (Ross, 2015). Resource wealth has been statistically linked both to the start and duration of violent, armed conflicts. Scholars argue that people take up arms either because they are upset over how government or private companies are (mis)managing resources and the revenues derived from those resources, or because they want to control resource revenues for their personal benefit.

But, in the case of Tanzania, where petroleum resources have yet to be fully extracted, could expectations about the future management of oil and gas motivate people to engage in violence? One theory that seeks to explain how expectations may motivate people to join a politically-motivated armed conflict aimed at the government is Ted Gurr's *relative deprivation theory* (Gurr, 1970). This theory states that the greater the mismatch between what people believe that they deserve or expect that they are rightfully entitled to on the one hand, and what they are actually capable of attaining and maintaining on the other hand, the greater will their discontent or frustration be. The bigger the levels of frustration, and the higher and more widespread these feelings are, the greater the likelihood for violent conflict to break out. Central

to the theory is the idea that people compare the status of their social or cultural group to that of other groups in society, and that these feelings of deprivation reflect subjective feelings, not necessarily absolute material deprivation. Those who feel they are worse off than other groups are likely to resort to violence. The novelty of Gurr's theory is its insights into why people participate in collective violence. Since politically-motivated violent conflict occurs between organized, identifiable groups in society rather than random individuals, it is vitally important to understand how groups of people decide that the use of violence is a legitimate way to resolve disputes.

While relative deprivation theory provides an intuitive and well-reasoned explanation for how and why economic or other social inequalities can lead to violence, it is hard to predict when shared feelings of disadvantage and dissatisfaction will turn violent. Here, collective action theories challenge the idea that emotions are sufficient to persuade people to engage in actions that are extremely costly for individuals. A good cause is rarely enough to spark large-scale group action, violent or peaceful, since such behaviour is very risky (Olson, 1965). Instead, groups must motivate members to undertake collective action by providing them with material or social benefits (for example, wages, food, social status or power) or by punishing them for breaking the rules. This is especially true in the case of violence, given that individuals risk death, imprisonment, and/or social, political and economic exclusion for their participation in actions that directly and violently challenge the government. In other words, it is likely much more difficult to convince people to be violent for political reasons than established theories suggest.

A survey experiment: Manipulating expectations about petroleum revenues in Tanzania

To better understand whether expectations can influence individuals' likelihood of participating in violence, a survey experiment was conducted in Dar es Salaam and the gas-producing regions of Lindi and Mtwara, which are areas of Tanzania where politicians have openly raised citizen expectations about the benefits of petroleum extraction (see also Chapter 18). A total of 3,060 individuals participated in the survey. The study randomly exposed the participants to four different prepared 'scripts' of information related to petroleum exploration, and then assessed how this exposure influenced their views of joining violent, collective actions, such as protests and riots aimed at challenging the government. Box 19.1 presents the full text of each script in English, however, the texts were provided to participants in Kiswahili. The text of Script 1 was designed to 'raise expectations' of potential gas-related benefits among participants, whereas Script 2 was drafted to 'moderate expectations.' Script 3 was written to raise concerns about government mismanagement of the gas revenues, while Script 4 highlighted the potential for revenues and benefits from the gas sector to be inequitably distributed.

BOX 19.1
Text of scripts used

Script 1: Tanzania has discovered large amounts of natural gas offshore in the regions of Mtwara and Lindi. Some politicians have previously stated that these gas resources could generate very large revenues and many new jobs, and that the gas resources could transform Tanzania into a much wealthier country. One leading politician recently stated that "the government has embarked on a grand plan, and Tanzanians in general should expect economic revolution in few years to come."

Script 2: Today, Tanzanian future gas benefits and revenues are in reality very uncertain. According to some recent estimates, if the status quo continues, there could in fact be very modest revenues, or perhaps even no revenues, from gas extraction.

Script 3: One reason for the low potential revenues is that gas revenues are often poorly managed, weaken the government bureaucracy, and lead to a more authoritarian state. Potential incomes and benefits then become much smaller than what they could have been.

Script 4: Moreover, gas revenues are often unequally distributed between regions. A few individuals, often those who are already rich, typically become even richer, while the majority does not benefit much, causing overall inequality to rise.

Table 19.1 lists which groups of participants were exposed to which scripts.

TABLE 19.1
Script exposure by participant group

PARTICIPANT GROUP	A	B	C	D	E	F
Script 1: Raising expectations		X	X	X	X	X
Script 2: Moderating expectations			X	X	X	X
Script 3: Mismanagement				X		X
Script 4: Unequal distribution					X	X

A survey questionnaire was then administered to each participant that contained the scripts. In addition to the scripts, other questions were asked about perceptions, attitudes and preferences regarding Tanzania's newfound petroleum resources.

The analysis of results proceeded as follows:

- To assess the impact of raising expectations, the responses of participants in Group A, who were not provided any information, were compared to responses of participants in Group B, who read Script 1.

- To assess how the current uncertainty about future gas revenues might shape perceptions and thus propensity for violence, the responses of participants in Group C, who read both Scripts 1 and 2, were compared the responses of Group B, who read only Script 1.
- To assess the influence of government mismanagement of the gas revenues, participants in Group D were given Scripts 1, 2 and 3 to read.
- To judge the effect of information that the distribution of gas revenues would serve to increase income inequalities, participants in Group E were given Scripts 1, 2 and 4 to read.
- Participants in Group F were given all four scripts to read.

Limited desire to participate in violence

The survey found that most participants disagreed with participating in violence against the government, even after being provided with information that tried to change their expectations about benefitting from future petroleum revenues. Figures 19.1 and 19.2 show how respondents answered questions about their attitudes towards violence after being exposed to the different scripts of information. Overall, 70% of respondents stated that they 'disagreed' or 'strongly disagreed' with participating in protests against the government, while 76% 'disagreed' or 'strongly disagreed' that violence is justified in support of a good cause.

FIGURE 19.1
Should people participate in protests against government?

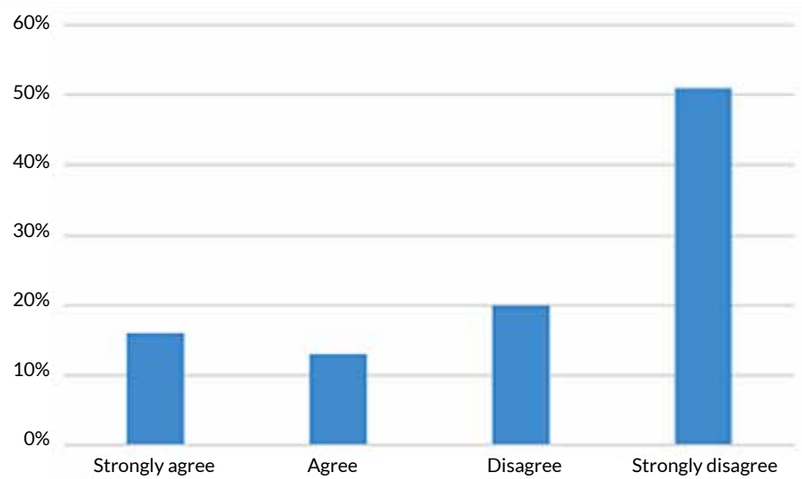
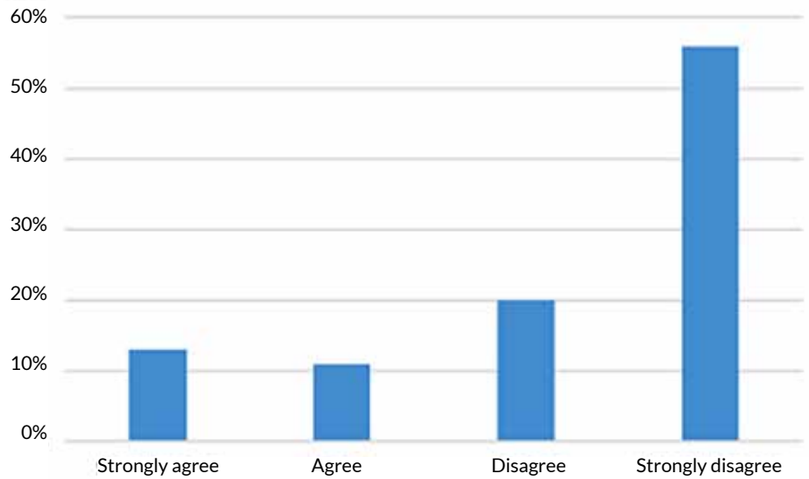


FIGURE 19.2
Is violence justified in support of good cause?



In line with the conflict literature (see Ross, 2015), which finds that people in certain demographic categories are more inclined towards violence, the survey results were adjusted to control for respondent background characteristics, such as gender, level of education, geographical origin and other relevant factors. However, after controlling for these factors, the results still show that a majority of respondents in Tanzania do not favour using violence, even after raising their expectations about future petroleum revenues.

Concluding remarks and policy implications

This study challenges the notion that people are relatively easy to motivate to participate in violence, particularly when there is a sense of shared injustice. Violence is a rare event, especially organized and politically-motivated violence in the form of riots, protests and armed conflict. As other work on petroleum-related violence and expectations argues (see Must & Rustad, 2016), expectations about what people deserve and what they are likely to receive are not sufficient on their own to convince people to act violently against the government. It is likely that a combination of emotional and material conditions must be in place in order to do so. Furthermore, political elites and "conflict entrepreneurs" (actors who promote conflict for personal gain) must create and raise expectations by crafting convincing narratives around injustice. Expectations can, however, be tempered by access to alternative sources of information. Providing citizens with thorough and updated information about the natural gas sub-sector can help them to make better-informed choices and reduce expectations, lowering the risk of violence breaking out due to unmet expectations.

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PART V: Conclusion — Prospects and challenges for governing Tanzania's petroleum resources

Photo: Amauri Aacosta Montiel/Unsplash

Collectively, the articles in this book examine the prospects for and challenges facing the development of Tanzania's petroleum sector. The contributing researchers share the common aspiration to contribute valuable and relevant evidence to assist the country's leaders and policy makers to successfully navigate the transition to a new petro-state and avoid the resource curse that has sorely afflicted other resource-rich developing countries. In this final chapter of the book, the editors summarize the lessons learned from research and offer recommendations for the government and other key stakeholders in planning, designing and implementing instruments for petroleum governance in a changing and complex world.

20. Lessons learned and policy implications

Odd-Helge Fjeldstad, Donald Mmari and Kendra Dupuy

This concluding chapter starts with a synthesis of the principal findings from the articles presented in the book. It then provides a summary of the topics and lessons learned in each part of the analysis. The chapter concludes with a set of practical recommendations derived from the research for the consideration of policy makers and other key stakeholders in Tanzania's petroleum sector.

Principal findings

Previous research has shown that many countries that are rich in natural resources have experienced the "resource curse" or "paradox of plenty", wherein their resource abundance has resulted in deepening poverty, non-democratic government and violent conflict (see Chapter 1). The mismanagement of resource revenues is crucial for explaining why each of these negative outcomes occurs. Repeatedly, politicians in resource wealthy states fail to harness the revenues and other benefits derived from the resources in ways that make their societies richer, freer and more peaceful.

However, much of the resource curse literature is either backward-looking or static, explaining cross-country variations in the existence of the resource curse. To date, the literature has not sufficiently examined how the resource curse may emerge, and why the curse comes about in some places, but not in others. To contribute to closing this research gap, this book follows developments in Tanzania from its early discoveries of offshore gas to examine the long-term process of how a country develops the institutions that govern resources, the choices it makes in doing so, and the incentive structures governing those

choices. A number of core findings emerged from the book's analysis, which are briefly described in the sections below.

Avoid the pre-source curse

As discussed in Chapter 1, the resource curse can manifest long before actual extraction and production of a resource commences. The 'pre-source curse' is experienced during the period between the discovery of a major resource endowment and its production. It results from too-high expectations about the amount of future revenues that will flow from the resource once it is extracted and commercialized (Cust, 2017). The pre-source curse strikes when large resource discoveries trigger exuberant government spending, high debt accumulation and reduced savings (see Chapter 7). Political effects can include increased corruption, reduced transparency in natural resource management, and the rollback of democratic rights and freedoms (see Chapters 15, 16 and 18). Social effects can include the outbreak of violence in the form of protests, riots and even armed conflict (see Chapter 19), as well as negative social changes that may come about from the immigration of workers to build the infrastructure needed for resource production.

A window of opportunity still exists for Tanzania to tap into global gas markets.

The importance of strong institutions for governing the petroleum sector

Institutions matter in determining why some countries experience the resource curse while others do not. Tanzania is in the process of strengthening existing institutions for petroleum governance and developing new ones, including regulatory agencies, legislation, treaties and contracts (see Chapters 3, 5, 6, 9 and 10). A critical question is how the Government can design institutions that safeguard the country against the (pre-) resource curse, and ensure that natural resources are translated into prosperity and inclusive development by prudently managing revenues, investing in economic and social infrastructure that are fundamental to economic growth, and diversifying the economy.

Best practice may not be the best option: The right laws, policies and institutions depend on the prevailing country context

While much has been written about the 'right' policies and legislation, implementation strategies have received less attention. Few studies examine how the implementation mechanisms and the institutions involved react to the interplay between market signals, public expectations and domestic policies, and which role each of these factors plays in decision making (see Chapters 3, 5, 6, 15, 16 and 17).

Much emphasis has been placed on what should be done to prevent the resource curse from occurring, partly based on so-called 'best practices' from other countries. This book contends that 'best-practice' institutions are, almost by definition, non-contextual. Instead, appropriate institutions for developing countries are often 'second-best' institutions, i.e., those that take into account context-specific market and government constraints that cannot be easily removed. Such institutions will

often diverge greatly from best practice. Therefore, the analysis investigates what can be done with respect to the choice of regulatory regime (Chapters 2 and 10), legislation (Chapter 3), tax and fiscal arrangements (Chapters 4 to 9), and local content (Chapters 11 to 14), given the political, institutional and economic constraints prevailing in Tanzania.

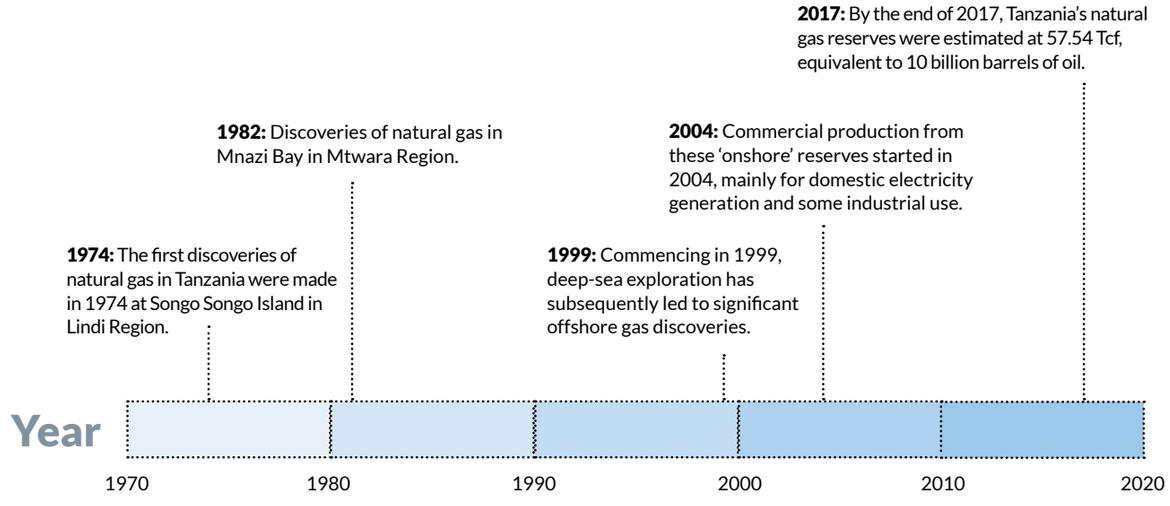
Summary of topics and arguments

The case studies presented in this book cover three major themes with respect to the emergence of Tanzania as a future petro-state. They are:

1. Fiscal management related both to the tax regime for the extractive sector and to public expenditures;
2. Local content policies, practices and sector linkages to ensure economic benefits from the petroleum sector are retained in-country; and
3. The politics that shape petroleum policies, including the influence of different stakeholder groups.

Each of these topics and the main arguments emerging from the book's case studies are summarized below. As was done in Chapter 2, the evolution and current status of the petroleum sector in Tanzania is first briefly outlined to place the conclusions in the proper context.

The evolution and current status of the petroleum sector in Tanzania.



The size of these offshore reserves has attracted the interest of international petroleum companies. However, due to continued volatility in global oil and gas prices, and to changes in the national policy and legislative environment since 2015, Tanzania's offshore discoveries, which account for about 80% of the country's total reserves, are yet to be developed. Negotiations between the Government and IOCs are ongoing for an investment of about USD 30 billion in a liquefied natural gas plant (see Chapters 5 and 6). However, a final decision to invest in extraction facilities is unlikely before 2022.

The LNG project has the potential to transform the Tanzanian economy. However, the process of extracting offshore gas is complex, technically challenging and costly. Delays in reaching final investment decisions between the Government and the IOCs, oil price volatility, and the increasing saturation of global LNG markets may weaken the value of Tanzania's prospective gas exports (see BMI, 2016; and Chapter 7). The changing position of the United States from being a net importer of petroleum products to becoming a net gas exporter could also dent the prospects of Tanzania's LNG project. Nonetheless, the IOCs have confirmed their willingness to invest in the project, conditional upon a conducive investment environment. Thus, a window of opportunity still exists for Tanzania to tap into global gas markets.

As it is the case elsewhere in the world, transforming hydrocarbon reserves into financial resources is not possible without partnership with IOCs, and to attract the necessary investments will require a favourable legal, regulatory and institutional environment. However, the current environment for business in Tanzania is challenging. The Government expects a fair deal that optimizes the government take and benefits its citizens. The IOCs, on the other side, require a stable and predictable legal, fiscal and commercial framework, including the sanctity of contracts and agreements. Over-reliance on IOCs financially and technologically, however, may infringe the country's sovereign rights over its resources. For Tanzania to have greater control of decisions regarding timing and production, TPDC will need to be sufficiently capitalized and staffed with skilled personnel.

The development of the natural gas sector is also constrained by the underdeveloped domestic gas market, due to Tanzania's poor industrial base, as well as the shortage of gas infrastructure. At present, the country can only make use of gas to transform the economy, create jobs and contribute to poverty alleviation to a very limited extent (see Chapters 2, 6 and 7). In 2016, the *Natural Gas Utilisation Master Plan* (NGUMP) was prepared to identify potential uses of natural gas in Tanzania. To vitalize industrial growth, TPDC envisions supplying natural gas to several other regions in addition to Dar es Salaam over the medium term. Realizing this vision will require new policy measures and constructive dialogue between the Government and investors on the financing of the gas distribution infrastructure, as well as determining tariffs for different domestic consumers of natural gas.

Developing suitable legal and fiscal frameworks for the petroleum sector

The book's first set of case studies focuses on the development of the legal and fiscal frameworks governing the petroleum sector in Tanzania. As discussed in

Chapter 3, major changes in the legal, regulatory and institutional frameworks for the sector occurred in the 1980s and again between 2013 and 2017. In both periods, the changes were triggered by hydrocarbon discoveries and the desire by the Government to secure resource benefits for Tanzanians through ownership, control and direct participation in the extractive sector. To simplify the administration of the petroleum industry, the comprehensive legislation of 2015 repealed both the *Petroleum Exploration and Production Act* (PEPA) 1980 and the *2008 Petroleum Act*. The new *Petroleum Act 2015* adopted the Production Sharing Agreement (PSA) as the preferred mechanism for contracting IOCs.

For Tanzania to have greater control of decisions regarding timing and production, TPDC will need to be sufficiently capitalized and staffed with skilled personnel.

The background for and main features of Tanzania's current system for taxation of the oil and gas sector are then described in Chapter 4. The fiscal regime is a mechanism through which the host government and the IOCs share risks and returns, and convert government policies into economic incentives (Tordo, 2007). Hence, the fiscal system is a critical factor in shaping the competitiveness of a country's oil and gas reservoirs. However, as discussed in Chapter 5, there is no ideal or model regime for policy makers to adopt; a given country's specific circumstances, needs, and the government's objectives will determine the final choice of model.

In Tanzania, PSA negotiations are tripartite in nature involving the government (the resource owner), TPDC (the licence holder) and IOCs (the contractor) and are governed by the *Model Production Sharing Agreement* (MPSA). Since 1980, MPSAs have evolved in five rounds (1989, 1995, 2004, 2008 and 2013) to adjust to changes in the local and international petroleum industry dynamics. The negotiable terms in the MPSAs include government and contractor take, royalties, cost recovery, state participation, profit share and taxation, and other payment obligations. IOCs normally bear all the risks and costs on the promise of receiving a share of the production in the event of discoveries, without which the costs incurred are sunk and irrecoverable. The costs incurred are therefore recovered only when production commences. In principle, PSAs do not divide profits, but rather the physical production. PSAs work on a reimbursable basis as eligible 'cost oil/gas' are recovered when resources are produced. The 'profit oil/gas' is a residual amount after cost and royalty deductions shared between the IOC and the host country based on pre-agreed share split.

PSAs contain numerous details ranging from financial to technical related issues. As stipulated in the 2015 *Petroleum Act*, state participation in the PSA is set at a minimum of 25%. The government pays for its share out of its future profit share. State participation increases investment risks as investors are obliged to mobilize the financial resources for its share and for the state. It gives right to the government to

earn revenue without having paid for initial capital investments. The PSAs oblige both the licence holder and the contractor *to satisfy the domestic market in Tanzania* from their proportional share of the production. The price could be determined based on the strategic nature of the project and not necessarily the full cost of supply.

As outlined in Chapter 5, Tanzania's fiscal regime for the petroleum industry, based on the various MPSAs since 1989, has fundamentally adhered to the principles of a good fiscal regime, i.e., flexibility, progressivity, stability, neutrality and risk-sharing. In the medium to long term, the suitability of the MPSA will be judged by the extent to which it optimizes the economic rents secured by the government and provides incentives to attract more investments in the petroleum sector. Chapters 6 and 7 investigate this trade-off and found that the main challenge may not lie the legislative framework, but in how the government practically negotiates the country's gas future to strike a balance between attractiveness for investment and the benefits secured for Tanzania.

Openness and transparency are important tools for avoiding corruption and favouritism.

A good MPSA does not always guarantee a good PSA. The final PSA is determined by the quality of the negotiations. Good negotiations are determined by the strength, knowledge, experience and bargaining power of the contracting parties. In addition, as emphasized in Chapter 6, a good PSA also works to the advantage of the host country only when recoverable costs are carefully managed. The IOC has an inherent interest in inflating costs because the more the recoverable costs, the higher the profit (Johnston & Johnston, 2015). The uncertainty emanating from the recent legislative changes, combined with the retroactive changes of the fiscal terms, may, however, undermine investors' confidence in the legal system, reduce incentives for the IOCs to reach a final investment decision for developing offshore gas reserves until more attractive commercial terms are guaranteed.

Based on the analysis in Chapter 3 through 7, at least four points of contention were highlighted in the current legislative and fiscal frameworks for the petroleum sector.

Recent changes in the legal framework may place too strong cards on the Tanzanian side of the table. For instance, the royalty quantum is now at the discretion of the Minister of Energy, who can amend it at any time. This may create uncertainty about the profitability of the project, as when the royalty percentage is set too high, it will increase the payback period. In addition, the National Assembly is empowered to review and demand renegotiation to the PSA agreements *after* they have been signed. Ideally, the National Assembly should have been required to endorse agreements before signing. The review of contractual terms entered in the past may erode investors' confidence in the country's policy and legal framework. Retroactive changes in PSAs may impair the sanctity of contracts and reduce sector competitiveness. Further, any dispute arising from the PSA agreement that cannot be amicably settled between the parties shall be referred for arbitration to courts in the Tanzanian judiciary system, thus compromising arbitration neutrality.

The cost recovery limit of 50% for both onshore and offshore discoveries may not adequately consider the different risks, costs and complexity of extracting gas onshore versus offshore. It also increases the period for IOCs to recover their investments. This is crucial, since cost recovery is a major determinant of both profit sharing and taxes payable to the host country. Information asymmetry makes recoverable costs susceptible to manipulation. As a result, the definition of recoverable costs is often at the centre of any disagreement.

While boosting the government's revenues, high bonuses can also affect the country's attractiveness and investment prospects. A careful comparative analysis of host countries with a similar or common operating environment might be necessary to inform the establishment of a fiscal regime that is also attractive for investors.

The contractor's obligation to satisfy the Tanzanian market with a share of the production may have some downsides. One possible effect is the propensity of the Government to implement uneconomical projects at huge costs to the economy, including government subsidies, on the pretext of strategic significance. Unless multiplier effects are large enough to offset the opportunity costs, such projects may lead to serious distortions within the petroleum industry and the economy more broadly. In addition, there seems to be no due consideration for the missed opportunity costs of supplying the domestic market instead of exports.

As highlighted in Chapter 7, one of the most important policy implications of uncertain—and likely modest—gas revenues is that the Government should not base its public finance plans on the expectation of a future gas windfall. Doing so would put Tanzania at risk of the pre-source curse which has plagued many countries, whereby too-high expectations of future revenues following large resource discoveries leads to economic problems. However, so far, the country's public finances appear to be in reasonable health, and Tanzania seems to be on the path towards meeting the East Africa Monetary Union (EAMU) requirement that the overall fiscal deficit does not exceed 3% of GDP by fiscal year 2020/21. It also appears to be currently maintaining reasonable debt levels. If the LNG project goes ahead, a modest increase in spending in the longer term (once gas revenues start flowing) may be possible. However, if primary expenditure was to grow faster than non-gas GDP for a sustained period, the deficit could be expected to increase rapidly, which even the arrival of large gas revenues might not be able to mitigate. Thus, as

emphasized in Chapter 8, it is essential to continue developing and strengthening the non-resource based tax system.

Finally, the analysis in Chapter 9 cautioned against Tanzania establishing a sovereign wealth fund to manage its petroleum revenues. Experiences from other countries with weak institutional settings show that creating a petroleum fund may produce perverse incentives for entrepreneurs to engage in rent-seeking rather than in productive activities, and for politicians to weaken rather than strengthen institutional quality. Based on the evidence, the analysis concluded that Tanzanian society will benefit more by investing in infrastructure, health and education, rather than establishing a sovereign wealth fund and investing in foreign assets.

Ensuring economic benefits from the petroleum sector

Policies for local content requirements are among the most important tools for host governments to extract additional domestic benefits from foreign investments in the petroleum sector. A study of stakeholder perceptions revealed strong consensus among government officials, institutions, academics, NGOs, donors and the IOCs that local content policies (LCPs) have potential to generate employment for Tanzanians in the petroleum sector, as well as encouraging employment more broadly in other sectors (see Chapter 11). However, building local capacity takes time, hence, implementing the LCP needs a long-term perspective. In particular, participation in the petroleum sector requires specialized skills across the industry value chain. At present, such skills are scarce in supply, hence weakening the employability of Tanzanians. Therefore, to ensure the longevity of the LCP, the Government should promote a direct link between the activities of local business associations, colleges and universities, and the petroleum sector.

As highlighted in Chapter 10, the limited institutional capacity of key institutions, including TPDC, TANESCO and the Petroleum Upstream Regulatory Authority (PURA), also constrains the development of the petroleum industry. Among the different government agencies, there are different approaches to local content and even definitions of what local content means. This has led to confusion and inconsistencies between different official policies, laws and regulations in terms of what local content is and what constitutes a local company. Various agencies are navigating issues of overlapping authority as they arise, instead of taking an integrated approach to optimizing local content. This is also occurring with regards to the question of who regulates midstream petroleum projects (such as the proposed liquid natural gas processing facility), as well as with the question of what mandatory targets for local participation should be set and in which areas. With many overlapping authorities involved in the implementation of LCPs, it is not surprising that the local content regulations required under the *Petroleum Act* leave many questions unresolved.

In addition to local content policies in the conventional meaning, a broader perspective of sectoral linkages is crucial. The analysis stresses that the petroleum sector, or the natural gas sub-sector, should not be allowed to remain as an enclave, but integrated with other sectors to promote a more diversified and resilient

economy. In Tanzania, huge potential exists to support the development of light manufacturing and industries that add value to the country's natural resources, for example, agriculture and agro-processing, tourism, and logistics and related business services. The petroleum industry can contribute by generating affordable and reliable energy for use in industry, transportation and the services sector (see Chapters 2, 13 and 14). Utility costs constitute a significant proportion of production costs. Thus, the progress towards better energy efficiency is one of the key enablers of competitiveness. Tanzania has the opportunity to achieve an appropriate national energy mix (which includes LNG) that takes into account relative opportunity costs of the respective sources of energy, the security of energy supply, the rapid development of new technology, and the declining costs of renewable sources.

One important policy implication of uncertain — and likely modest — gas revenues is that the Government should not base its public finance plans on the expectation of a future gas windfall.

As discussed in Chapter 11, the challenges and complexities posed by the introduction of a LCP, underline the need for a comprehensive and inclusive consultative process with all stakeholders so as to appropriately manage expectations about what can be achieved and to prepare for effective implementation. In-depth consultation with stakeholders will add to the knowledge base of decision makers and contribute to ensuring that divergent views and positions are made public. Openness and transparency are also important tools for avoiding corruption and favoritism. Finally, an effective consultation process provides a platform for mutual understanding that can build trust and reduce tensions and conflict.

However, the general view among stakeholders was that the Government did not organize a proper consultative process about the local content policy, an omission that is considered to be a major challenge for implementing the LCP. The involvement of stakeholders is essential for creating a sense of ownership of the policy and, thus, improving its chances of successful implementation. Further, there seems to be consensus among Tanzanian stakeholders that the LCP should ensure that local companies are given opportunities to participate in the petroleum sector by establishing requirements for the IOC's use of local goods and services in their operations (see also Chapter 15 on lobbying). However, requirements for purchasing locally produced goods and services will have no effect if domestic companies are unable to deliver goods and services of the required technical or quality standards.

In addition to the mining and gas sectors, the National Economic Empowerment Council has identified agriculture, construction and manufacturing sectors as priority sectors for the country to develop local content. This demonstrates the need to examine implications for local content requirements by looking at the legislative

framework as a whole, rather than focusing exclusively on the mining and/or petroleum acts. Crucially, more broad-based growth from the extractive sector may be achieved if linkages are established with the agricultural sector.

Almost 90% of the poor in Tanzania live in rural areas and two-thirds of the labour force is currently engaged in agriculture and related activities. Therefore, Chapter 14 investigated the potential to link agriculture with the extractive sector through food value chains. In particular, the gas sector may open up new market opportunities for farmers to supply food items for high-value food buyers such as caterers, restaurants, supermarkets and processors. At present, however, most farmers in Tanzania produce primarily for their own consumption. For the domestic farming sector to benefit from increased high-value food demand will necessitate closer integration into regional markets. And to be able to take advantage of new market opportunities, existing household, infrastructural and institutional constraints will need to be addressed. Several key challenges were identified:

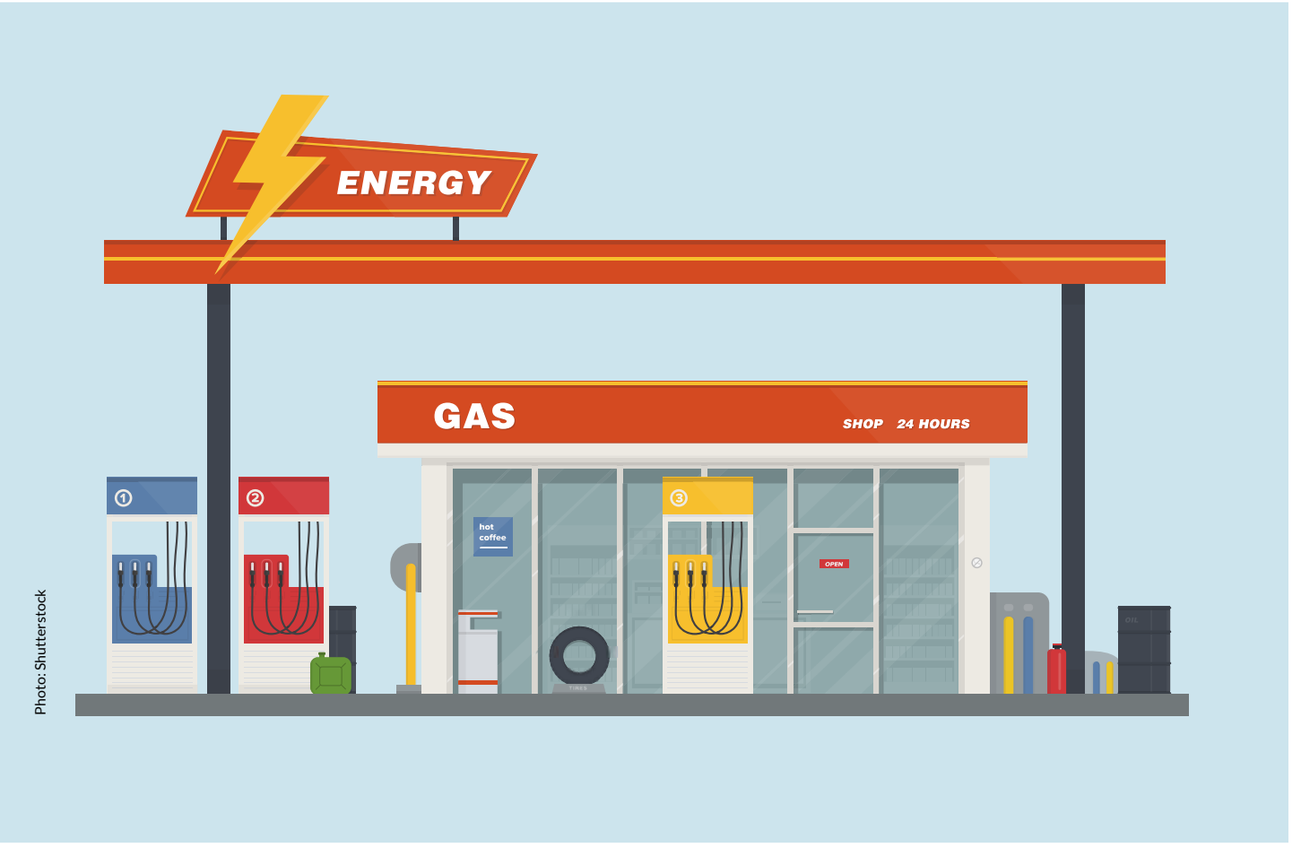


Photo: Shutterstock

- Many smallholder farmers are constrained by lack of physical and financial assets and do not have the resources that will enable them to produce large enough quantities to supply the regional or urban markets.
- Farmers may lack the managerial and technical skills to meet the stringent quality requirements from high value food buyers.
- Lack of access to communication and information and poor rural infrastructure often isolate local markets and local farmers from the urban buyers.
- Since factor markets are not well developed in rural areas, key inputs, such as seeds, may not be available at the required quantity, quality and consistency.

These challenges are not insurmountable but concerted efforts to address them will be required either directly through reform and support initiatives, or indirectly by influencing market incentives.

Shaping petroleum policies in Tanzania

The case studies in Part IV of the book investigated the politics influencing petroleum policies in Tanzania. To begin, Chapters 15 and 16 highlighted that interest groups from business, civil society and government have been positioning themselves to shape the tax legislation and regulatory frameworks applicable to the petroleum sector.

In Chapter 15, the analysis concluded that uncoordinated public policy and a lack of regulation on lobbyism are interlinked challenges for petroleum governance. Left unchecked and unresolved, they can lead to conflicting agenda and policy stalemate, in addition to mistrust and competition between regulatory authorities. The study also warned that unregulated lobbyism may lead to regulatory capture by interest groups, biased policy decisions and/or outright corruption.

More positively, Chapter 16 examined how civil society in Tanzania and other resource-rich countries can be a key actor in ensuring good natural resource governance. Civil society organizations (CSOs) have demonstrated the capacity to perform four vital roles that help to ensure that resource exploitation results in economic development, democratic government and social peace – the exact opposite of the resource curse (Furstenberg, 2015; Aaronson, 2011; Bieri, 2010; Ross, 2015). The roles that civil society perform are as follows:

- An expert role in creating, disseminating and using information that can empower citizens to hold government to account for the use of resources and the benefits from their extraction, and to change socially costly behaviours, such as environmental degradation or financial mismanagement.
- An agenda-setting role, whereby through moral authority, grassroots representation, and/or pursuit of the public benefit, CSOs gain legitimacy to set international and national agenda in resource governance, allowing them

to draw attention to neglected problems, such as resource-related human rights violations and concerns for the environment.

- A representative role, whereby previously marginalized actors are given the opportunity to voice their concerns and take part in decision-making about resource access and use. By fulfilling this role, CSOs can have a democratizating effect in resource governance. In turn, the grievances and protests of less privileged social groups—and the risk of violence—can be reduced. Broader participation in resource management puts a brake on monopoly power and discretionary authority that enable corruption in resource sectors.

- A monitoring role. As watchdogs, organizations monitor and influence public and private actors' adherence to the accepted rules of resource extraction and production. CSOs can pressure these actors to comply with formal laws and internationally accepted standards of fair behaviour. CSOs can watch the behaviour of individuals and organizations involved in resource management, and use information channels to expose and stop corrupt and other negative behaviours.

However, the analysis also revealed that CSOs are facing major challenges in their work on Tanzania's emerging petroleum sector. Ongoing restrictions on civil and political liberties are reflected in a shrinking space for civil society in the country. This development is partly related to a resurgence of resource nationalism in the government, particularly regarding the country's extractive industries, as discussed in Chapters 12 and 13. Consequently, CSOs may be less empowered to voice critical views of government, including on the management of the petroleum sector. Meaningful engagement by CSOs on petroleum governance is likely to be weakened as government consultations with CSOs diminish.

Despite this evidence indicating a contraction in the scope of civic discourse in Tanzania, whether and how the government consults and informs citizens does matter for the design of public policy and, ultimately, for economic and social outcomes. Results from the survey experiment reported in Chapter 18 indicate that the nature of information provided to citizens on future revenue flows from gas discoveries affected their expectations about future corruption. In turn, these expectations are likely to shape behaviour. For example, if citizens expect corruption to increase, they may become more willing to engage in corruption themselves, because the social norm against corruption weakens. This implies that having robust institutions in place that limit the scope of corruption and manage citizens' expectations becomes even more important in the presence of large natural resource revenues. Thus, understanding citizens' and politicians' expectations and behavior related to natural resources is crucial for designing effective policies.
Could expectations about the future management of oil and gas go as far as to motivate people to engage in violence? This question is examined in Chapter 19. According to a theory developed by Ted Gurr (1970), the greater the mismatch between what people believe that they deserve or expect that they are rightfully entitled to, and what they are actually capable of attaining and maintaining, the

greater their discontent or frustration will be. The bigger the levels of frustration, and the higher and more widespread these feelings are, the greater the likelihood for violent conflict to break out. Key to this theory is the idea that people compare the status of their social or cultural group to that of other groups in society. Those groups who feel they are worse off are more likely to resort to violence.
The survey experiment reported in Chapter 19 found that most people disagreed with participating in violence against the government. The majority of people interviewed did not favour using violence, even after their expectations about future petroleum revenues were raised. This study challenged the notion in the literature that people are relatively easy to motivate to participate in violence, particularly when there is a sense of shared injustice. As other work on petroleum-related violence and expectations argues (Must, 2018; Must & Rustad, 2016), expectations about what people deserve and what they are likely to receive are not enough on their own to convince people to act violently against the government. Expectations can, however, be tempered by access to alternative sources of information. Providing citizens with thorough and updated information about the natural gas sub-sector can help them to make better-informed choices and reduce expectations, lowering the risk of violence breaking out due to unmet expectations.

Policy implications and recommendations

The case studies presented in this book yield a number of practical recommendations for consideration by Government on the planning, designing, implementation and monitoring of instruments and institutions for petroleum governance.

Improve the overall business environment in Tanzania

A conducive environment for business investment in Tanzania is required to develop the petroleum industry. The Government's blueprint for regulatory reform is already in place. It provides guidelines and commitments to eliminate policy, regulatory and institutional constraints to improve the business environment and investment climate. To expedite negotiations and ensure timely execution of the LNG project, it is essential to build trust between the Government and the IOCs. Trustworthy relations are required to achieve an outcome that ensures reasonable investment returns for the IOCs on the one hand, and the optimal government take and benefits to the people of Tanzania on the other. Additional provisions to safeguard the neutrality of arbitration in the event of disagreements between IOCs, the Government and TPDC should be considered.

Consider adjustments to the legal and fiscal frameworks to accelerate development of the gas sector without jeopardizing long-term gains for the country

Lower global gas prices, coupled with ongoing uncertainty about investment in the LNG project, have impacted the outlook for Tanzania's offshore gas. Under existing market and policy conditions, there is a reasonable chance that IOCs will not proceed with the project. Moreover, investments may shrink further if the Government increases taxes and/or requires companies to share a greater portion of the gas with Tanzania's domestic market. The Government could wait and hope that conditions improve, but this will delay the point at which the country can

start earning revenues from the project. Alternatively, if the Government wants to accelerate development, without harming long-term gains for the country, three policies are proposed:

(i) Adopt a more progressive tax regime.

(ii) Reconsider the decision for raising the share of gas to be sold to the domestic market and set a percentage target that better balances competing economic and commercial perspectives.

(iii) Create a legal framework that will build confidence and trust among investors and the Tanzanian public.

Establish open, inclusive and transparent consultation processes among all stakeholders in the petroleum sector

The high degree of suspicion and lack of trust that presently exists among stakeholders within the public sector, between government and private sector, and among private sector stakeholders including civil society organizations hampers effective policy dialogue and is likely to impact implementation of the policies. Therefore, changes to the legal and fiscal frameworks for the petroleum sector should be managed through consultation and communication with industry stakeholders. Through open, inclusive and transparent processes, the Government can strengthen Tanzania's reputation as a desirable destination for large-scale, long-term investments.

Promote knowledge transfer between IOCs and domestic firms

Huge potential exists for domestic companies to gain technical know-how and technological capacity from IOCs. Stimulating spillovers may not only be important for local suppliers to participate in value chains in the extractive industry, but also for the opportunity of domestic firms to develop in other sectors. Cluster development and regional trade can also used to promote innovation and technology transfer.

Prioritize development of gas-intensive industries

To effectively harness the socio-economic potential of natural gas, efforts should be directed at developing gas-intensive industries, such as petrochemicals and fertilizers. Developing the country's gas distribution infrastructure should also be given priority. To maximize the benefits that are likely to accrue from the industry, development of indigenous human capital is crucial for meaningful local content to take place. Building strong institutions in the commercial, regulatory and policy areas is also pivotal to ensuring sustainable development of Tanzania's petroleum sector.

Establish clear lines of regulatory oversight for local content in the petroleum and mineral sectors

Implementation of Tanzania's local content policy for the petroleum and mineral sectors has been hampered by inconsistency, confusion and poorly coordinated interventions. Overlapping institutional authorities should be replaced by clear lines of regulatory authority to advance Tanzania's vision of leveraging its gas and mineral wealth for industrial transformation. This is particularly important in the areas of training and skills development, the development of small and medium enterprises, and the monitoring and enforcement of regulations.

Simplify the administration of the LCP

The Government should keep the administration of the LCPs as simple and transparent as possible. The costs of complying with complex requirements are often high and can, in turn, make corruption harder to detect, especially if transparency is low. It is important to incorporate measures that take into account the fact that, corruption is generally more prevalent in the extractive sector than in other sectors. Without external checks, and if the LCP is left entirely to the Government to manage, there is a high likelihood that the policy will generate avenues for rent-seeking and corruption.

Huge potential exists to support the development of light manufacturing and industries that add value to the country's natural resources, for example, agriculture and agro-processing, tourism, and logistics and related business services.

Manage public expectations on expected benefits from the gas sector

As the LNG export timing is unpredictable, public expectations must be well managed to minimize the risk of turning the resource blessings into a resource curse. Future policy development should include in-depth consultations to maximize the decision makers' knowledge base, add to the transparency of the process, and manage expectations. This approach might also contribute to effective implementation and reduce tension, suspicion and conflicts among stakeholders.

Engage and support CSOs to broaden citizen participation and information sharing in the petroleum sector

It is in the interest of the Government to engage and support civil society organizations to broaden citizen participation, disseminate information and manage public expectations. By setting clear and simplified rules governing CSOs, a well-coordinated space for civil society involvement can be created and democratic principles upheld.

Undertake a comparative analysis of Tanzania's fiscal and legal framework with other emerging gas-rich countries

Increased revenues are essential in order to live up to citizens' demands for improved public services and economic development, and the objective to become fully independent of foreign donors. However, an unbalanced fiscal regime may make

Tanzania an unattractive investment destination for IOCs. Given that major fiscal and legislative changes have taken place during the last three years, a comparative assessment of Tanzania's current fiscal and legal framework with other emerging gas-rich states is recommended. Does it boost or constrain the competitiveness of the petroleum sector based on the country's resource endowment and operating environment? These concerns also warrant a careful review of the global gas supply and market conditions to assess the appropriateness of these terms in the current international context.

Invest petroleum revenues in infrastructure, health and education rather than a petroleum fund

The Government of Tanzania is looking for the best policies and institutional designs to turn future petroleum revenues into citizens' welfare, development and jobs. One option is to establish a petroleum fund with the aim of transferring petroleum wealth into long-term financial wealth. We caution against this. The payoff for Tanzanian society is most likely much higher by using petroleum revenues to invest in infrastructure, health and education, rather than to establish a petroleum fund that will invest in foreign assets.

Increase broad-based tax compliance and expand the non-resource revenue base

Last, but not least, it is important not to ignore the development of the non-resource domestic tax base. Continued efforts to increase tax compliance and expand the revenue base (including the number of citizens and firms paying tax) are essential for successful revenue management in general. Maintaining non-resource taxation in the presence of large future gas revenues is essential since natural gas is a non-renewable resource that will eventually be depleted. A well-functioning tax system is crucial to generate government revenues after resource depletion. Furthermore, petroleum prices tend to fluctuate heavily. Other sources of revenues, such as tax payments, can provide an important buffer to help mitigate or reduce the effect of this volatility on the economy.

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Annexes

Glossary

Artisanal and small-scale mining: Operations carried out by individuals, groups, families or cooperatives with minimal or no mechanization, often in the informal sector of the market.

Backward linkages: A situation where an industry or business supports another industry or business and creates economic interdependence such that their actions affect each other.

Civil society: Non-governmental organizations and institutions that manifest interests and will of citizens.

Cluster development: Economic development technique that involves grouping economic activities into zones to promote economic development within the cluster by improving the competitiveness of one or several specific business sectors.

Concession: A contractual right to carry out a certain kind of business or activity in a given geographic area. In the mining and petroleum industries, it refers to a permission granted by the government to explore for and produce oil, gas and/or mineral resources in a specific area.

Corruption: Abuse of entrusted power for private gain.

Cost oil/gas: The portion of oil or gas produced that an operator uses to recover the predefined and prudently incurred costs in producing such oil or gas.

Developmental state: A state that is focused on economic development and takes necessary policy measures to accomplish that objective.

Downstream operations: Processes that take place after the production phase and to the point of sale. Includes the refining of petroleum crude oil and the processing and purifying of raw natural gas, as well as the marketing and distribution of products derived from crude oil and natural gas.

Elite capture: A form of corruption wherein public resources are controlled for the benefit of a few individuals of superior social status in detriment to the welfare of the larger population.

Extractive industries: Industries dealing with the extraction of natural resources such as minerals, oil, and natural gas.

Extractive Industries Transparency Initiative (EITI): A global initiative that provides standards for governing extractive industries, wherein companies are required to publish what they pay in revenue and taxes to host governments, and governments are required to publish the amount received from companies and how they benefit the public.

Factor markets: A market where factors of production such as labor, physical capital and raw materials are bought and sold.

Forward linkages: Describe the process of how a company in a given sector sells its goods, products or supplies to a company in a different sector.

Gender mainstreaming: An approach to policy-making that takes into account the interests and concerns of both women and men.

Grand corruption: Abuse of high-level power that benefits the few at the expense of the many and causes serious and widespread harm to individuals and society.

Institution: An establishment, foundation or organization created to pursue a particular type of venture operating under a set of rules. The term commonly applies to both informal institutions such as customs, or behavior patterns important to a society, and to particular formal institutions created by entities such as the government and public services.

International oil company: A company that operates globally and has huge experience, financial resources and technology regarding the oil and gas industry.

Lobbying: An attempt by individuals or private interest groups to influence government decisions or public policy through legal means.

Local content policies: Guiding principles aimed to ensure optimal benefits to host country from extraction of resources by encouraging local employment and the use of locally produced goods and services in backwards-linked supply chains of companies active in a given country.

Midstream operations: Involves the transportation (by pipeline, rail, barge, oil tanker or truck), storage and wholesale marketing of crude or refined petroleum products. The midstream sector may also include natural gas processing plants that purify the raw natural gas.

Natural resource governance: The norms, institutional setup, legal framework, regulatory framework and processes that determine how power and responsibilities over natural resources are exercised, how decisions are taken, and how citizens participate in and benefit from the management of natural resources.

Negative externalities: Economic activity that creates costs or negative consequences for society.

Parastatal: Organizations that are wholly and exclusively owned by the state to serve the government interests, either directly or indirectly.

Pre-source curse: Negative economic, political and social effects of the discovery of high-value natural resource deposits before extraction.

Production sharing agreement: A contractual agreement between the government and the petroleum company to undertake exploration, development and production, and share the profit of and oil/gas.

Pro-cyclical fiscal policy: A policy where the government increases government spending and reduces taxes in economic booms and reduces spending and increases taxes in recessions.

Rent-seeking behaviour: Behaviour designed to increase one's share of existing wealth, without creating new wealth. Rent-seeking results in reduced economic efficiency through misallocation of resources, reduced wealth-creation, lost government revenue, heightened income inequality and potential national decline.

Resource curse: The negative political, economic and social effects of extracting high-value resources like oil, gas and minerals.

Resource nationalism: An economic policy where the government exerts high level of authority over the resources located on its territory to advance political, social or industrial objectives.

Royalty: Payment to an owner for the use of their asset or property, such as patents, copyrighted works or natural resources.

Social license: The ongoing acceptance or consent of local stakeholders such as employees and the general public for a company to operate.

Sovereign wealth fund: A state-owned investment fund derived from a country's reserves accumulated from revenues generated from exporting of natural resources.

Special economic zones: Geographically delimited areas of a country designed for economic activity. Generally governed by different laws and policies than the rest of that country to facilitate industrial activity growth through fiscal and regulatory incentives and infrastructure support.

Spillovers: Unintended consequences or benefits of an activity.

Transfer pricing: Methods for pricing transactions within and between enterprises under common ownership or control.

Upstream operations: Comprises exploration, appraisal, development and production stages of oil and gas operations of wells that recover and bring the crude oil and/or raw natural gas to the delivery point.

Organizations working on resource governance in Tanzania

International organizations and programs	Website
African Development Bank (AfDB)	www.afdb.org/en
African Tax Administration Forum (ATAF)	www.ataftax.org/en
European Commission (EC)	http://ec.europa.eu/
International Monetary Fund (IMF)	www.imf.org
International Trade Centre (ITC)	www.intracen.org
Oil for Development Programme (OfD)	https://norad.no/en/front/thematic-areas/oil-for-development/
Organization for Economic Co-operation and Development (OECD)	www.oecd.org
Tax for Development Programme (TfD)	https://norad.no/en/front/thematic-areas/macroeconomics-and-public-administration/tax-for-development/
United Nations Development Programme (UNDP)	www.undp.org
United Nations Economic Commission for Africa (UNECA)	https://uneca.org
World Bank (WB)	www.worldbank.org
Research institutions and think tanks	
African Economic Research Consortium (AERC)	http://aercafrica.org/
African Tax Institute (ATI)	www.up.ac.za/african-tax-institute
Centre d'Études et de Recherches sur le Développement International (CERDI)	www.cerdi.org
Center for Global Development (CGD)	www.cgdev.org
Centre for Policy Studies (CPS)	www.cps.org.za
Chr. Michelsen Institute (CMI)	www.cmi.no
Danish Institute for International Studies (DIIS)	www.diis.dk/en
Economic and Social Research Foundation (ESRF)	www.esrftz.org/
International Bureau for Fiscal Documentation (IBFD)	www.ibfd.nl
International Centre for Tax and Development (ICTD)	www.ictd.ac
International Growth Centre (IGC)	www.theigc.org
Institute on Governance (IOG)	www.iog.ca
Institute of Tax Administration (ITA)	http://ita.ac.tz/
International Institute of Public Finance (IIPF)	www.iipf.net
Natural Resource Governance Institute (NRGI	www.resourcegovernance.org
Mzumbe University	https://site.mzumbe.ac.tz/
Mzumbe University Dar es Salaam Campus College (MDCC)	https://drps.mzumbe.ac.tz/index.php/dcc
Oxford University	www.ox.ac.uk/
REPOA	www.repoa.or.tz
Roskilde University	https://ruc.dk/en
Sokoine University of Agriculture (SUA)	www.sua.ac.tz/
University of Dar es Salaam (UDSM)	https://www.udsm.ac.tz
University of Dodoma (UDOM)	https://udom.academia.edu/
UNU-WIDER	www.wider.unu.edu/
UONGOZI Institute	http://uongozi.or.tz/
Business associations	
Africa Regional Organization of the International Association of Tanzania Oil and Gas Service Providers (ATOGS)	https://atogs.org/
Confederation of Tanzania Industries (CTI)	https://www.cti.co.tz
Oil and Gas Association of Tanzania (OGAT)	www.ogat.or.tz
Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA)	www.tccia.com/tccia
Tanzania Chamber of Mines (TCM)	http://tcme.or.tz/
Tanzania Private Sector Foundation (TPSF)	https://tpsftz.org
Government institutions and agencies	
Bank of Tanzania (BoT)	www.bot.go.tz/
Energy and Water Utilities Regulatory Authority (EWURA)	www.ewura.go.tz/
Institute of Tax Administration (ITA)	www.ita.ac.tz/
Ministry of Energy (MoE)	https://www.nishati.go.tz/en/
Ministry of Finance and Planning (MoF)	www.mof.go.tz/
Ministry of Minerals (MoM)	https://www.madini.go.tz/
Petroleum Upstream Regulatory Authority (PURA)	http://pura.go.tz/pura-home
President's Office Regional Administration and Local Government (PO-RALG)	http://tamisemi.go.tz/
Tanzania Petroleum Development Corporation (TPDC)	http://tpdc.co.tz/
Tanzania Revenue Authority (TRA)	www.tra.or.tz
Multi-stakeholder initiatives	
Tanzania Extractive Industries Transparency Initiative (TEITI)	www.teiti.or.tz/
Civil society organizations	
ActionAid (AA)	www.actionaid.org.uk
African Network of Centers for Investigative Reporting	https://investigativecenters.org/
Budget Advocacy Network (BAN)	www.bansl.org

Christian Aid (CA)	www.christianaid.org.uk
Civil Society Legislative Advocacy Centre (CISLAC)	www.cislacnigeria.net/
Commission Episcopale Justice et Paix (CEJP/CENCO)	www.cordaid.org/
Commonwealth Association of Tax Administrators (CATA)	www.catatax.org
Global Alliance for Tax Justice (GATJ)	www.globaltaxjustice.org
International Budget Partnership (IBP)	www.internationalbudget.org
International Consortium of Investigative Journalists (ICIJ)	www.icij.org/
International Tax Dialogue (ITD)	www.itdweb.org
Norwegian Church Aid (NCA)	www.kirkensnodhjelp.no
Publish What You Pay (PWYP)	www.publishwhatyoupay.org
Policy Forum (PF)	www.policyforum-tz.org/
Tax Justice Network Africa (TJNA)	www.taxjusticeafrica.net/
Consultancy and advisory firms	
Deloitte Tanzania	https://www2.deloitte.com/tz/en.html
EY Tanzania	https://www.ey.com/tz/en/home
KPMG East Africa	https://home.kpmg/ke/en/home.html
PWC Tanzania	https://www.pwc.co.tz/

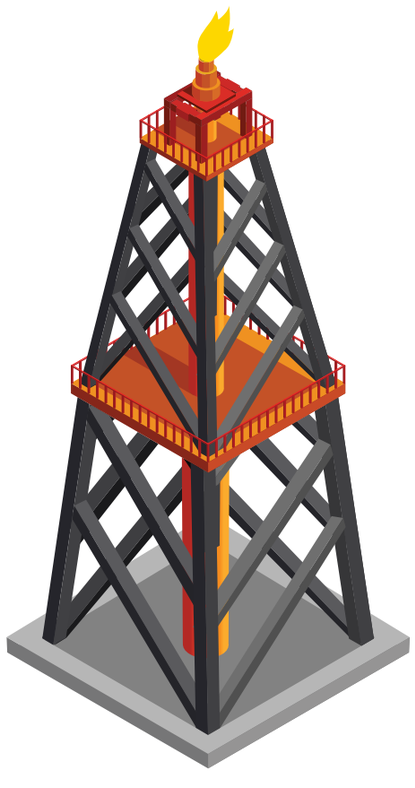

Illustration: Macrovector/Freepik

International oil and gas companies operating in Tanzania

Operator	Block Name	Partners
Afren	Tanga	Petrodel Resources Ltd.
Aminex (Ndovu)	Kiliwani N	Rakgas
	Lindi	Solo Oil
	Mtwara	Solo Oil
	Ntorya	Solo Oil
	Nyuni	
BG-Shell	Block 1	Ophir, Pavilion Energy
	Block 4	Ophir, Pavilion Energy
Dodsal Resources	Ruvu	
Equinor (previously Statoil)	Block 2	Exxon Mobil
Heritage Oil	Kyela	
	Rukwa South	
Maurel & Prom	Bigwa-Rufiji	Hollick Trading, Petroquest
	Mafia	Hollick Trading, Petroquest
	Mnazi Bay	Wentworth Resources
	Mnazi Bay Pd	Wentworth Resources, TPDC
Rak Gas	Pemba-Zanzibar	
Orca Exploration Group Inc	Songo Songo	
Petrobas	Block 6	Shell, Equinor
	Block 8	Shell
Signet Petroleum	Mnazi Bay North	
Swala Energy	Kilosa-Kilombero	

Source: The editors (updated per 10 October 2019)

Key institutions for petroleum data generation and management

Lulu Olan'g, Blandina Kilama, Jan Isaksen and Fred Matola

Key institutions in generating data

Institutions that play a key role in generating and managing data related to the petroleum sector in Tanzania are summarized below. The institutions are grouped into four categories: (1) government offices and agencies; (2) private companies; (3) civil society organizations (CSOs); and (4) think tanks. A brief overview of each institution is provided.

(1) Government offices and agencies

National Bureau of Statistics (NBS)

According to the *Statistics Act of 2015,* as amended in 2018, NBS is the focal point of statistics in Tanzania (URT, 2018). As the national statistics office, NBS is responsible for the production, coordination, supervision and dissemination of official statistics and for the custodianship of official statistics in the country. Important roles for the NBS are: (i) to advise the government on all statistical matters; (ii) provide high quality statistical information to the public; (iii) be a central depository for reports and publications; (iv) develop methods and standards, concepts and definitions for official statistics; and (v) coordinate and supervise the national statistical system. The NBS may, in the performance of these functions, subcontract individuals or organizations.

The NBS periodically produces two reports that are related to the petroleum sector: The *National Accounts* and the *Annual Survey of Industrial Production* (NBS, 2016). The National Accounts show the contribution of the sector as presented under the category of mining and quarrying industry to the economy according to the reporting standards. The *Annual Survey of Industrial Production* disaggregates the information related to (a) mining of coal and lignite; (b) mining of metal ores; and (c) mining support service activities; and (d) oil and gas. NBS also produces annual revenue statistics reports which show composition and trends of tax revenue. Time series data is mainly collected from respective ministries and government agencies depending on the type of data each produces.

Key institutions for the petroleum sector include:

Tanzania Petroleum Development Corporation (TPDC)

This is the national oil company of Tanzania, wholly owned by the Government of Tanzania. TPDC undertakes commercial aspects of petroleum in the upstream, midstream and downstream operations, and is custodian of the government's interests in the petroleum and natural gas agreements. The major roles of TPDC include: exploration and production of petroleum; management of distribution and storage facilities; holding exploration and production rights; and contract/hold equity or participate in oil concessions, franchises, and licences. TPDC generates and manages data relating to exploration, development, and extraction of oil and gas resources. TPDC acquires, analyzes and disseminates information on issues relating to the natural gas industry, including government participation in petroleum and gas activities. TPDC keeps records about drilling operations and the areas in which any geological, geophysical or geochemical work is carried out. TPDC also maintains data on the quality of any crude oil and composition of natural gas produced, quantities of natural gas discovered and processed, and the quantity of natural gas flared or vented.

Energy and Water Utilities Regulatory Authority (EWURA)

EWURA is responsible for regulating midstream and downstream petroleum and natural gas activities as well as electricity industry undertakings. The authority produces statistics on the supply of petroleum products and natural gas infrastructure development. By law, EWURA is mandated to manage the National Petroleum and Gas Information System (NPGIS). The NPGIS is an integrated and centralized information system containing midstream and downstream petroleum and gas activities data and relevant reference data of the country and international comparisons. NPGIS is a strategic planning tool for the government and other interested parties, and for informing the public about the status of the gas industry. Unless otherwise prescribed, all information contained in the NPGIS is available for inspection by the public.

EWURA also maintains a database of the Tanzania Local Suppliers and Service Providers (LSSP) containing details of local suppliers, service providers and other entities that meet the requirements of the petroleum industry of Tanzania. As of February 2019, the database contains 310 local business entities. The approved suppliers and service providers are eligible to participate in the execution of works and provision of various goods and services in the petroleum midstream and downstream activities in mainland Tanzania. The database is accessible on the websites of the Authority. The LSSP was initially published on 11 June 2018.

Petroleum Upstream Regulatory Authority (PURA)

PURA was established in 2015 with the mandate to regulate petroleum upstream activities in Tanzania. By law, PURA is required to manage the National Oil and Gas Resource Data Bank for the storage of petroleum data. PURA monitors all phases of petroleum exploration discovery, evaluation and delineation, commercial evaluation of discovery, reservoir performance and production to ensure optimal rates for the discovery, commercialization, and recovery of petroleum resources. It manages, classifies and declassifies national exploration

and production databases. Further, it administers the production sharing agreements or other contractual arrangements, petroleum exploration licences, development licences and production permits. PURA produces and manages the geological maps that include geophysical records and interpretations relating to the licence areas. It maintains data relating to exploration, development of licensed areas, gas fields, areas for future bid rounds and areas under application, and pipelines. The authority also manages data on deep well status such as discovery and dry wells, seismic surveys, geotechnical, geochemical, geophysical and any other data collected from the exploration blocks.

Gas Supply Company (GASCO)

A subsidiary company of TPDC that maintains and generates data related to gas sales and national gas infrastructure operations (the Madimba and Songo Songo gas processing plants, and the Mtwara-Dar es Salaam natural gas pipelines). GASCO has exclusive rights to purchase, collect, transport and sell gas produced in the country, including onshore, shallow-shore and offshore.

Tanzania Electric Supply Company Limited (TANESCO)

TANESCO is the national electric company, exclusively owned by the Government of Tanzania, and responsible for power generation, transmission and distribution. TANESCO produces and manages data on generation, transmission, distribution and sales of electricity in mainland Tanzania, and the sale on bulk power to Zanzibar. TANESCO maintains the grid and off-grid power generation data as well as power generation from independent power producers (IPPs).

Bank of Tanzania (BoT)

By law, BoT is the operational manager of the oil and gas sovereign wealth fund. It is therefore also responsible for the fund's data management. However, information on the fund has yet to be made public as the fund is not yet operational, as it is guided by a threshold revenue from natural gas

Local government authorities (LGAs)

In areas with petroleum resources, LGAs generate data on service levy.

Tanzania Revenue Authority (TRA)

TRA assesses, collects and reports on taxes and levies derived from gas revenues, which include corporate income tax, skills development levy, Value Added Tax (VAT) and import duty.

Tanzania Extractive Industry Transparency Initiative (TEITI)

TEITI is a multi-stakeholder initiative that aims to increase transparency and accountability in the extractive industries in Tanzania. The Government of Tanzania is committed to the Principles and Criteria of the Extractive Industries Transparency Initiative (EITI), a global standard for revenue transparency. EITI is a global coalition of governments, companies and civil society organizations. Currently, 35 resource-rich countries are implementing the EITI and have committed to disclose company payments and government receipts of taxes and revenues from the extractive sector. In Tanzania, the TEITI-Multi Stakeholder Group (MSG), which includes 16 representatives from the government, companies and civil society, oversees implementation of EITI in Tanzania. The TEITI-MSG is supported by the TEITI Secretariat which is responsible for the daily coordination and implementation of activities under the guidance of the TEITI-MSG. TEITI produces annual reconciliation reports that provide an overview of the performance of the extractive sector by disaggregating specific commodity and company reports on what the government has received and what extractive industry companies have paid in taxes, fees, royalties etc. in that year. TEITI requires extractive industry companies to disclose Mineral Development Agreements and Production Sharing Agreements or any other agreements, as well as accurate records of the cost of production, capital expenditures at every stage of investments, and volumes of production and export data from extractive resources. TEITI further conducts investigations on quantifiable discrepancies of revenue data provided by the government and companies, respectively.

(2) Private companies

With PSAs between the government, TPDC and IOCs, petroleum companies undertake the exploration, development, production and distribution activities in the sector, hence they are the main data generators. REPOA and CMI (2018) categorizes companies operating in Tanzania under upstream, midstream and downstream operations as follows:

a) Companies conducting exploration, development and extraction of natural gas

b) Companies working on pipelines and the future LNG plant.

c) Gas processing plants.

d) Independent power producers (IPPs) producing power from natural gas

For an overview of companies, see the Tanzania Petro Factbook (REPOA and CMI 2018).

(3) Civil society organizations (CSOs)

Good governance is considered essential for ensuring inclusive benefits from oil and gas production. This need has led to a number of advocacy initiatives by CSOs to aid Tanzania's development agenda on managing natural resources (Dupuy et al., 2019). CSOs have played an important role in creating awareness; offering capacity development programmes; producing and disseminating information on the extractive sectors (minerals and natural gas) to citizens, policy makers, civil servants and other stakeholders; conducting research, compiling information and data; engaging in advocacy; and empowering citizens to speak up on issues affecting their lives.

The ***Natural Resource Governance Institute (NRGI), Oxfam, Norwegian Church Aid*** and ***Hakirasilimali*** are among the most prominent CSOs that have contributed to create awareness and public engagement on the mineral and natural gas sectors in Tanzania. The ***Tanzania Episcopal Conference, National Muslim Council of Tanzania*** and the ***Christian Council of Tanzania*** jointly published

reports in 2012 and 2017 on the "Million-dollar question". These reports estimated that Tanzania had a massive loss in revenues from extractives due to a combination of tax evasion, tax incentives and capital flight.

Resource Governance Index (RGI)

The RGI was created by NRGI as a tool for assessing policies and practices that authorities employ to govern their countries' oil, gas and mining industries. The index provides a composite score for each assessment. Composite scores use three index components: value realization, revenue management, and the country's enabling environment. In 2017, Tanzania was ranked as number 36 of 89 oil and gas producing countries, scoring 53 points out of 100 (see NRGI, 2017).

(4) Think tanks

The Tanzanian think tank ***REPOA***, in collaboration with ***Chr. Michelsen Institute*** (CMI) and the National Bureau of Statistics (NBS), with funding from the Norwegian Embassy in Dar es Salaam has operated the research and capacity building programme "Tanzania as a Future Petro State" since 2014. Through this partnership, REPOA has become a resource hub for data on the petroleum sector in Tanzania (REPOA, 2019). Primary data have been collected through three major surveys: two on citizens' knowledge and expectations about petroleum extraction and production in Dar es Salaam and the gas-producing regions Mtwara and Lindi and one on how expectations about the petroleum sector shape citizen attitudes and behaviour. Other datasets included in the resource hub are time series mainly collected from NBS surveys and other government agencies such as the Ministry of Energy, the Ministry of Finance and Planning, TRA, TPDC and EWURA. Data include environmental statistics, household energy consumption, imports of petroleum products, natural gas value added at current and constant prices, and national average monthly prices (in TZS) for petroleum products.

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Useful international databases

SOURCE	VARIABLES	COVERAGE AND FREQUENCY
GOVERNANCE		
Afrobarometer (AFR) http://afrobarometer.org/data	Public attitude surveys on democracy and governance in Africa	More than 35 countries, periodic rounds
QOG from the Quality of Government Institute, Gothenburg http://qog.pol.gu.se/data	QoG Standard Data QoG OECD Data QoG Expert Survey Data (Structure and behavior of public administration) QoG EU Regional Data (Three levels of European region governance) QoG EQI Data (novel survey data on corruption and governance)	QoG Standard Data 2500 variables from 100 data sources QoG OECD Data 1300 variables from 75 data sources QoG Expert Survey Data covers 159 countries. QoG EU Regional Data 450 variables QoG EQI Data 207 regions within the EU
Global Integrity Index. Africa Integrity Indicators http://aii.globalintegrity.org/scores-map?stringId=transparency_accountability&year=2016	114 indicators divided between two main categories: Transparency and accountability, and Social development	54 countries, every two years
ECONOMY		
Economist Intelligence Unit (EIU) http://country.eiu.com/tanzania	Country analysis Political analysis Risk analysis Industry analysis	205 countries, updates and forecasts Extensive subscription services Free subscription gives limited free data, graphs and projections Trials possible

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SOURCE	VARIABLES	COVERAGE AND FREQUENCY
Global Competitiveness Report http://reports.weforum.org/global-competitiveness-index/downloads/	114 indicators. Main data groups include: institutions, infrastructure, macroeconomic environment, health, education and training, market efficiency, technology, market size, business sophistication and innovation	The Global Competitiveness Report 2017-2018 assesses the competitiveness landscape of 137 economies
International Monetary Fund (IMF) http://data.imf.org/?sk=5DABAFF2-C5AD-4D27-A175-1253419C02D1	Exchange rates by country External sector current, financial account and international investment position by country	
World Bank http://datacatalog.worldbank.org/	Stores a wide variety of data. Best access probably directly to the World Bank Open Data website. A catalogue is downloadable	Not all data sets will have data for Tanzania
UNCTAD Data Center http://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en	International trade, goods and services Economic trends Foreign direct investment External financial resources Population and labour force Commodities Information economy Creative economy Maritime transport	150 time series covering a wide range of topics. Built upon common rules and harmonized production processes. Most time series cover long periods for countries as well as some 150 analytical country groupings
UNCTAD Country Profiles http://unctadstat.unctad.org/CountryProfile/en-GB/index.html	Key economic statistics by country. International indicators for country comparisons. Most of the selected indicators are available in the UNCTAD Data Center	
International Labour Organization (ILO) Statistics start page http://www.ilo.org/ilostat/faces/home/statisticaldata/new_link_10?_afrLoop=9852137278304 1#!%40%40%3F_afrLoop%3D98521372783041%26_adf.ctrl-state%3D13tgs0kj62_699 Database http://www.ilo.org/ilostat/faces/help_home/data_by_subject?_adf.ctrl-state=13tgs0kj62_154&_afrLoop=98317251898442#!	Populations and labor force Employment Public sector employment Unemployment and labor underutilization Woking time Earnings Labor cost Consumer prices Occupational health and safety Industrial relations Labor productivity Working poor Informal sector and informal employment	The database for year 2017 includes more than 190 countries Estimates for reference period 1990-2014 projections for 2015-2050
COMTRADE https://comtrade.un.org/	Repository of official international trade statistics and relevant analytical tables. All data also accessible through application programming interface (API)	The UN Comtrade Database is the largest depository of international trade data. It contains well over 1.7 billion data records for 45 years and is available on the internet. Access is free, but Comtrade may charge for exceptionally big downloads
INDUSTRY		
EITI https://eiti.org/data	Country data and reports on extractive industries: Production, Revenues Tax and legal frameworks	52 countries (2019)
A Barrel Full http://abarrelfull.wikidot.com/oil-and-gas-field-database	Oil and gas fields Oil and gas pipelines Oil refineries	Database on oil and gas fields Under construction, but useful
International Energy Agency (IEA) https://www.iea.org/statistics/	**Energy balance flow charts** **Energy atlas** serves maps/graphs on emissions, coal, electricity, energy balance, energy indicators, natural gas, oil and renewables. **Country balance** pages display balance including coal, oil and oil products, hydroelectricity, geothermal, biofuels and natural gas from 1990 to 2018	Coverage for an extensive range of energy information (including natural gas) for IEAs' 30 member countries. Also good coverage for about 100 non-member countries. Extensive data free of charge but IEA also charge for some databases and publications
United States Geological Survey (USGS) https://www.usgs.gov/products/data-and-tools/overview	A large number of statistical series and study reports on mainly geological topics. An integrated data finder provides access to data which is largely free of charge.	US Government website. USGS is also active worldwide and covers all countries, including Tanzania
SOCIAL		
Living Standards Measurement Study (LSMS) World Bank www.worldbank.org/lsms	Wide range of household data. Survey documentation contains complete listing. Access to data free, but requires filling application form with full information on user identity, purpose etc.	The **LSMS+** project aims to improve the availability and quality of individual-level data collected in household surveys. The first three surveys supported under the LSMS+ include: **Malawi** Integrated Household Panel Survey, **Tanzania** National Panel Survey – Extended Panel, and **Ethiopia** Socioeconomic Survey. Additional surveys are planned

SOURCE	VARIABLES	COVERAGE AND FREQUENCY
The DHS program, USAID http://dhsprogram.com/data/available-datasets.cfm	Demographic and Health Surveys including antenatal care, children health, family planning. Access to data requires registration and login.	For Tanzania, 11 datasets are available for years from 1991-92 to 2017
RANKINGS		
Cingranelli Richards Human Rights Database (HUM) http://www.humanrightsdata.com/p/data-documentation.html	Quantitative information on 15 internationally recognized human rights variables.	202 countries, annual, 1981 - 2011
Freedom House https://freedomhouse.org/reports	Downloadable databases with FH rankings re: Freedom in the world political rights and civil liberties Freedom of the press Freedom on the net	Freedom in the world 195 countries (2019) Freedom of the press 195 countries (2019) Freedom on the net 65 countries (2018)
Social Watch http://www.socialwatch.org/node/14365	Gender equity index	168 countries, annual, latest 2012
Trade unions rights violations survey http://www.ituc-csi.org/annual-survey-of-violations-of,271?lang=en	Trade unions rights violations	145 countries (2019), annual
Transparency International Corruption Perceptions Index https://www.transparencyorg/whatwedo/publication/corruption_perceptions_index_2018	Corruption Perceptions Index (CPI)	180 countries (2018), annual
Worldwide Governance Indicators http://info.worldbank.org/governance/wgi/index.aspx#home	Voice and accountability Political stability and absence of violence Government effectiveness Regulatory quality Rule of law Control of corruption	Reports aggregate and individual governance indicators for over 200 countries (2017), annual, 30 individual data sources

SOURCE	VARIABLES	COVERAGE AND FREQUENCY
VARIOUS		
Gallup World Poll (GWP) http://www.gallup.com/services/170945/world-poll.aspx	Topical coverage varies, but GWP covers e.g. items under: Business and economics Citizen engagement Environment Government and politics Communications and technology Law and order Well-being and work	Gallup conducts nationally representative surveys face to face or via telephone in more than 160 countries and over 140 languages, covering the emerging and developed world. The Gallup Panel consists of approximately 100,000 individuals
GAP minder https://www.gapminder.org/data/	Gap foundation is a non-profit organization working with the UN. Mostly socio economic data. Easy search download and particularly the (bubble) charts gives quick impressions of how series move over time.	519 data time series

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Over the last decade, large deposits of natural gas have been discovered off the southern coast of Tanzania. This book analyzes the long-term process of how a country develops the institutions that govern resources, the choices it makes in doing so, and the incentive structures governing those choices. In doing so, the book provides a detailed empirical account of the opportunities and challenges facing the country with respect to resource governance, revenue and expenditure management, local content development, and the integration of the petroleum sector in the rest of the economy.

«Translating oil and gas resources into economic development and welfare for all Tanzanians depends on strong and evidence-based policymaking and public debate (...) this book will be an important contribution to achieving this.»

Elisabeth Jacobsen
Norwegian Ambassador to Tanzania

«This book comes at a right time when the Government of the United Republic of Tanzania is making concerted efforts to transform its economy and to maximize the benefits of its natural resources to the citizens. (...) The book is highly recommended for academicians, researchers, policy makers, and development practitioners from both the public and private sectors.»

Professor Benno J. Ndulu
Mwalimu Nyerere Professorial Chair in Development,
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